GRINDMASTER™

CORPORATION

Models 3341, 3341A, 3342, 3352
Remote Beverage Freezers Manual



Model 3341
Model 3341A



Model 3342
Model 3352

Crathco®

Frozen Beverage Dispensers

Formerly Wilch

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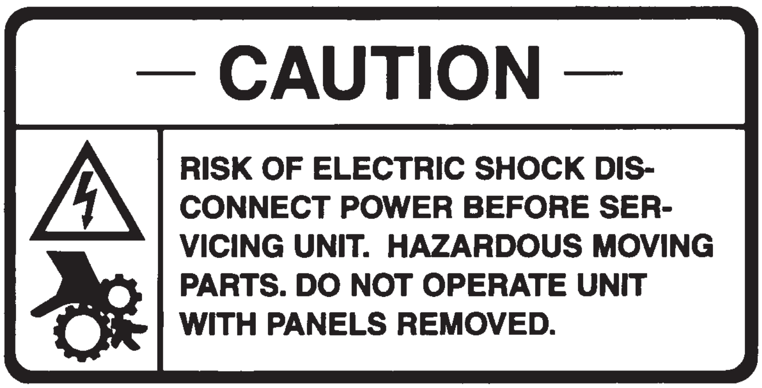
Information contained within this manual is subject to change without notice.

Contact Grindmaster Corporation's Customer/Technical Service Department at 1-800-695-4500 with any questions or for clarification.

OPERATOR'S SAFETY PRECAUTIONS

IMPORTANT: Failure to comply with the following safety precautions may result in severe personal injury or damage to the machine.

1. Read and understand the operating instructions in this manual thoroughly. Only allow properly trained persons to operate this machine.
2. Note all warning labels on the freezer. If any warning labels are missing or damaged replace them immediately.
3. Do not wear loose fitting garments or jewelry which could cause a serious accident.
4. Stay alert at all times during operation.
5. Keep operating area clean.
6. Do not attempt any repairs unless the main power supply to the freezer has been disconnected. Contact Grindmaster Technical Service for service assistance.
7. Do not put objects or fingers in the dispense plunger.
8. Do not operate freezer if any excessive noise or vibration occurs. Contact your authorized service agent.
9. Be certain machine is installed with adequate space for proper air circulation. (See installation section.) Failure to provide sufficient ventilation will reduce freezer performance and void equipment warranty.



Located on the right, left and rear panels. (part # W0600218)

FREEZER APPLICATION AND SPECIFICATIONS

Remote Freezers

The freezer consists of a freezing cylinder with a rotating internal auger (dasher) that is belt-driven by an electric motor. The auger scrapes frozen product off of the inside of the refrigerated cylinder.

Crathco remote beverage freezers are designed to operate in conjunction with a remote condensing unit or be connected to a central refrigeration system. It is recommended that the condensing unit have no more than 2 1/2 hp per barrel to ensure maximum efficiency. The refrigerant must be R404A (Dupont®HP62®). The refrigeration for each barrel is controlled by the liquid feed solenoid. The liquid feed solenoid is opened and closed by the limit switch attached to the drive motor. (When the product consistency reaches the desired point, the switch closes and de-energizes the liquid feed solenoid 20 seconds later.) Twin units operate with each barrel independently. Quick connect refrigeration connections are supplied with each unit. Each freezer is factory supplied with 5/8" suction and 3/8" liquid connections. The piping connecting the freezer with the remote condensing unit or central system should be sized according to industry standards. The installer is responsible for sizing the refrigeration lines to the unit. When properly operated and cared for, the remote freezers will provide many years of service. Proper care includes regular cleaning and maintenance. To minimize the amount of maintenance necessary, follow the operating procedures outlined in this manual.

There are four variations of the remote unit:

3341 – standard single barrel remote unit
3342 – standard twin barrel remote unit
3341A – single barrel remote unit with internal autofill system
3352 – dual barrel remote unit with internal autofill system

Remote Freezers (cont.)

The autofill system on the 3341A and 3352 models is designed to keep the product hopper full to a predetermined level. This assembly eliminates the necessity of pre-mixing concentrate and water and the possibility of manual mixing errors. The mixed product is automatically fed to a Remote Fill Control which is located in the freezer. The Remote Fill Control then adds pre-mixed product to the freezer mix storage reservoir as required.

When the autofill switch is ON and when the level drops below the probe for 15 seconds, the product feed solenoid opens. This allows the product from the remote pumping system to fill the hopper. When the liquid level reaches the probe, the product feed solenoid closes. NOTE: As a safety, the refrigeration liquid feed valve closes until the level in the freezer reaches the probe. To bypass the automatic feed feature, simply turn the autofill switch to manual. This allows the refrigeration to operate independently of the autofill and the hopper must be filled manually.

Product Tips

These freezers were designed to dispense a wide variety of frozen beverages including frozen fruit juice, frozen lemonade, slush and frozen cocktails. These products can be served in consistencies ranging from thin to fairly thick.

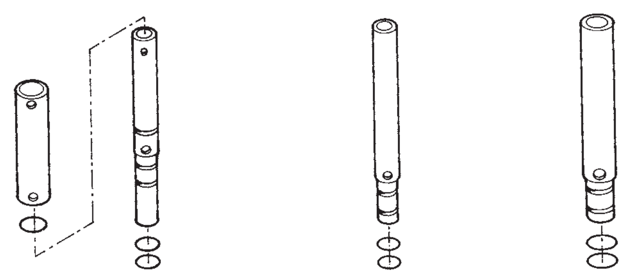
Two types of dispensing valve plungers and product consistency springs are available depending on the thickness of the product being served. These parts are interchangeable depending upon your needs. One plunger, part W0480438 has one horizontal outlet slot and is used to serve thin to medium products such as frozen lemonade and slush. The other plunger, part W0480451 has two horizontal outlet slots and is used to serve thicker product such as neutral base frozen cocktails. A red spring, part W0631239, is used on the drive motor to adjust product consistency to serve thin to medium products. The yellow spring, part W0631238, is used for thicker product. The spring is located next to the drive motor behind the right hand side panel.

Over an extended period of time, some products, such as frozen cocktails that contain alcohol, have a tendency to separate, or stratify. Separation of product on the mix storage hopper can result in frozen product quality inconsistency. Simply keeping the product, in the mix storage hopper, stirred on a regular basis will eliminate this problem.

Some cappuccino or latte mixes contain dairy products which can spoil if not refrigerated. If the freezer is to be turned off at night these products must be removed from the freezer.
Contact your local health department regarding its regulations for proper mix handling and storage.

Carburetor Assembly

Your new freezer uses a metering device, known as a carburetor, to feed the proper ratio of mix and air into the freezing cylinder (and to prevent frozen product from rinsing out of the freezing cylinder). The carburetor, or carb tube, is a tube with a hole, or series of holes, bored through the side. It is located in the hopper and fits in the hole that leads to the freezing cylinder. Air flows into the freezing cylinder through the top of the tube and mix flows in through a smaller hole in the side of the carb tube. The size of the mix inlet hole can be balanced with the viscosity (thickness) of the liquid mix and product draw rate, in such a way that the proper amount of mix is fed into the freezer cylinder to blend with air at just the right ratio. Mix viscosity varies by mix type, mix temperature and mix age. Different serving rates also demand different feed rates. For many products, the proper mix to air ratio is generally accepted to be two parts mix to one part air. This proportion yields a finished product that is both tasty and profitable. At this ratio, one gallon of liquid mix will yield a volume of one and one-half gallons of frozen product. This additional volume is the overrun in the product. Crathco offers three versions of carb tubes (see Figure A). Depending on the product being served and overrun requirements there is a standard tube for most slush or cocktail products, a low overrun carb tube that allows all air trapped in the freezing cylinder to escape and a smoothie/shake carb tube. This carb tube has an outer sleeve that can be rotated to line up with different hole sizes to provide various levels of overrun. *Most applications only require the standard carb tube.*



Thick product carb tube (W0471136) | Standard carb tube (W0471076) | Low overrun carb tube (W0472060)

Figure A

Mix Considerations – General

Freezing characteristics are affected by the amount of sweeteners and solids in the mix, called BRIX. BRIX can be measured with an instrument called a refractometer. A BRIX reading of between 11 and 14 will provide optimum freezer operation. Mixes with the correct BRIX level will freeze down to a smooth, uniform consistency. Mixes with too high a brix level will take longer to freezer down and will yield a soft, wet, frozen product. Mixes with too low a brix level will have larger ice crystals and will have a tendency to dispense slowly or freeze up machine.

Alcohol content affects product freezing characteristics. High alcohol content may prevent the freezer from serving a product at proper thickness.

NOTE: Always take BRIX measurements using mix that has been thoroughly blended, before it is frozen. Always allow frozen mix to thaw thoroughly before taking a reading.

For maximum output capacity always pre-chill mix before adding it to the freezer. Pre-chilled mix gives the freezer a head start on the freezing process and will speed both initial freeze down and recovery time. It is normal for output capacity to decrease when warm mix is added, or when the freezer is operated in a warm area.

Freezer Specifications

	Models 3341/3341A	**Models 3342/3352**
Dimensions (HxWxD)	26 1/2"H x 13"W x 29"D 67cm x 33cm x 73cm (includes header box)	26 1/2"H x 18 1/2"W x 29" D 67cm x 47cm x 73cm (includes header box)
Electrical	115 volt, 60 Hz, 1 Phase Dedicated 20 Amp circuit	115 volt, 60 Hz, 1 Phase Dedicated 20 Amp circuit
Drive Motor	(1) 1/2 hp	(2) 1/2 hp
Compressor	Remote condensing unit	Remote condensing unit
Cooling	N/A	N/A
Actual Weight	110 lbs. (49.9 kg)	140 lbs. (63.5 kg)
Mix Hopper Capacity	3341-5 gallons (18.9 liters), 3341A-2.25 gallons (8.55 liters)	3 gallons (11.3 liters)
Freezing Cylinder Capacity	1-1/2 gallons (5.7 liters)	1 1/2 gallons (5.7 liters)
Refrigerant	See Serial Number Plate	See Serial Number Plate
Refrigerant Charge	See Serial Number Plate	See Serial Number Plate
High Side (approximate operating pressure)	120ºF – 130ºF	120ºF – 130ºF
Low Side (approximate operating pressure)	10ºF – 15ºF	10ºF – 15ºF
High Side Design Pressure	See Serial Number Plate	See Serial Number Plate
Low Side Design Pressure	See Serial Number Plate	See Serial Number Plate

INSTALLATION

Shipment Transit

The freezer has been operated and tested at the factory. Upon arrival the complete freezer must be thoroughly checked for any damage which may have occurred in transit. **NOTE**: *A Tip (N) Tell warning device is placed on each shipping carton at the factory. If the arrow tip is blue, the carton has been tipped in transit.* (see Figure B)

THE CARRIER IS RESPONSIBLE FOR ALL DAMAGE IN TRANSIT WHETHER VISIBLE OR CONCEALED. DO NOT PAY THE FREIGHT BILL until the freezer has been checked for damage. Have the carrier note any visible damage on the freight bill. If concealed damage and/or shortage is found later, advise the carrier within 10 days and request inspection. The customer must place any claim for damage and/or shortage with the carrier. Grindmaster Corporation cannot make any claims against the carrier.



Figure B

Installing your Freezer

1. Place the self-sealing rubber pad on a level counter stable and strong enough to support the freezer's weight. If equipped with legs instead of pad, install legs by screwing them into the four leg holes on the bottom of the unit.
2. Make sure freezer is to be placed in a location that is within 6' of a properly grounded circuit and allows adequate space for rear remote refrigeration connections and on the sides for air circulation.

NOTE: Minimum clearance is 2" (5cm) on both sides and 8" (20cm) above the freezer. (see Figure C)

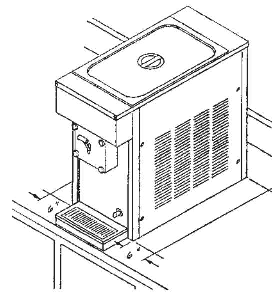


Figure C

3. Remove the side panels with a Phillips screwdriver and supporting all four sides, lift machine up and place in appropriate area.

> ⚠ ***CAUTION: IF EQUIPPED WITH SPINNER DO NOT LIFT UNIT BY SPINNER SHAFT TO AVOID SERIOUS DAMAGE TO SPINNER.***

> ⚠ ***CAUTION: BEVERAGE FREEZERS ARE HEAVY PIECES OF EQUIPMENT. IT IS RECOMMENDED THAT MOVING OR LIFTING THE UNIT BE DONE BY TWO PEOPLE TO AVOID INJURY.***

> ⚠ ***CAUTION: FAILURE TO ALLOW ADEQUATE VENTILATION WILL VOID THE WARRANTY.***

4. Remove cable tie used to secure motor during shipment. Make sure motor rocks freely. (see Figure D)
5. Connection of refrigeration system: The unit is supplied with mating quick disconnect fittings. Removal of the rear panel will show: One 5/8" suction connection, one 3/8" liquid connection for each barrel. Connect unit to condensing unit using the quick disconnects supplied. Line sizing to the unit should be sized to minimize pressure drops through the suction and liquid lines. (see Figure E)
   NOTE: This procedure must be done by a qualified technician.
6. 3341A and 3352 – Connect autofill product feed hose from pump assembly to solenoids via the 1/4" tube in the rear of the machine. Page 35.

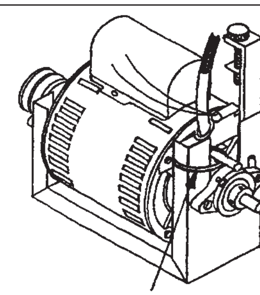


Figure D – Removing Plastic Cable Tie



Figure E

Installing Your Freezer (cont.)

7. Review hopper contents to make sure all parts are available:

Part #	Description
W0600224	Manual
W0600073	Rubber Pad Sheet
W0600121	Merchandiser Installation Sheet
W0600012	MSDS Sanitizer Sheet
W0600159	Warranty Registration Card
*	Drip Tray Kit
*	Hopper Cover
W0480445	Valve Handle
W0631230	Valve Spring
*	Carb Tube
*	Dispense Valve Plunger
W0470076	Lubricant
W0631903	Sanitizer Packets
W0600058	Laminated Cleaning Card
W0600327	Seal Installation Instructions
W0890220	4" Leg Set

*Optional items specified when the unit is ordered.

8. Fill out Warranty Registration Card with the requested information and mail to Grindmaster Corporation.
9. Replace side panels.
10. Assemble the dispense valve following the instructions on page 9. The valve plunger, spring and retaining pin come in the small parts bag.
11. Be sure ON-OFF-CLEAN switch (toggle switch located underneath the electrical box) is in the "OFF" position.
12. Connect the power cord directly to a properly grounded DEDICATED 120V/60Hz, 15 Amp circuit. Do not use an extension cord.

⚠ CAUTION: Do not alter or deform the plug in any way! Altering or deforming the plug may damage unit and will void warranty.

13. Remove the drip tray kit from the bubble wrap. Separate the parts and remove the protective coating. The drip tray is mounted on two screws that are located on the lower front of the freezer cabinet.
14. Place the key hole slot of the drip tray support bracket on to these screws and tighten the screws.
15. Angle the back of the drip tray surround bracket into the drip tray support bracket and lower bracket to lock it into place.
16. Place drip tray onto drip tray surround bracket.
17. Place the louvered drip tray insert into drip tray.
18. A private label or different drink header can be installed by removing two screws from the electrical box cover. Carefully remove electrical box cover. Place the header (transparency) between the clear and opaque plates (plastic lens). Put these in place under the lip of the machine top. Slip the electrical box cover back on to machine and reinsert the screws. (see Figure F)

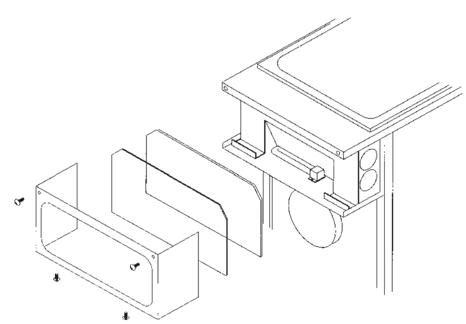


Figure F

OPERATION AND ADJUSTMENTS

How to Operate

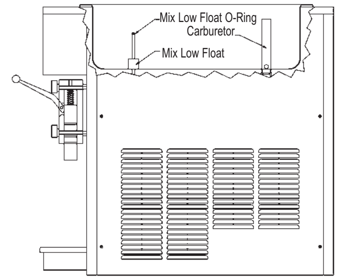


Figure G

1. Sanitize unit following the cleaning instructions starting on page 10.
2. Fill the mix storage hopper following the instructions on page 10. Allow barrel to fill with product to proper level, then insert carb tube from parts bag in hole toward rear of hopper. See Figure G.
3. Turn power switch to “ON” position.
4. Allow product to freeze in barrel. Compressor will turn off when product reaches pre-set consistency.
5. To dispense product pull down valve handle and release when done.
6. If product consistency is not as desired, adjust per the instructions on page 7.
7. Refill mix storage hopper when “mix out” light is ON.
8. Clean the unit regularly following local health codes.
9. Perform maintenance when necessary to increase the life of the unit. See chart in this manual for regular maintenance schedule.

Mix Low Function

These models will sense when the mix is low in the hopper. On 3341 and 3342 models, a simple float mechanism is used to sense when mix is low in the hopper. (see Figure G) When the mix level is low, the mix low light located on the front of the machine will illuminate. **NOTE:** Do not run the unit under mix low conditions for long periods of time. This can affect machine performance or damage componentry.

On 3341A and 3352 models, mix low is sensed via the autofill system. When the mix level is low, the mix low light will illuminate continuously for 2 minutes. After 2 minutes the light will begin to blink off and on for the next 8 minutes. At the end of the 10-minute time the light will illuminate fully again. After the 10-minute cycle, the mix out safety function is activated making the unit inoperable. The safety function shuts off the autofill and refrigeration. The unit can be reset back to the freeze mode by simply adding mix into the hopper.

NOTE: If the mix low safety function has activated disabling the unit, and the product has not been added for an extended period of time – verify the product is okay for re-use. If it is not, use fresh product to restart the unit. Empty the unit of old product and follow cleaning and sanitizing procedures (page 8).

Consistency Adjustment

From time to time, it may become necessary to readjust the consistency setting (thickness) to compensate for variation between different mixes or to switch from one type of product to another. This adjustment is made as follows:

1. ***Disconnect electrical power.***

> **WARNING: Do not attempt to readjust the freezer until electrical power has been disconnected.**

2. Remove right side panel (facing the freezer).
3. Use the adjustment screw, situated on the front of the drive motor mounting bracket to change product thickness. Turn the thumbscrew (3 full turns for red spring, 1 turn for yellow spring) to make a noticeable change in consistency. (see Figure H)

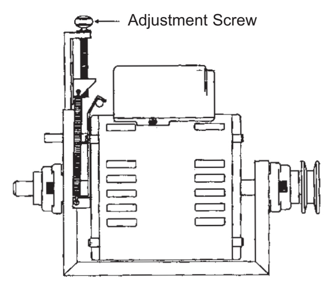


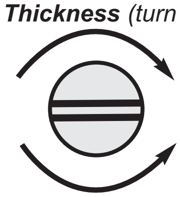
Figure H

NOTE: Clockwise is for thicker product consistency and counter clockwise is for thinner product consistency. (see Figure I)

4. Reinstall the side panel, reconnect power.
5. Turn freezer to “ON” and allow it to freeze to desired consistency.
6. Check product. Repeat process until desired consistency is achieved.

NOTE: When making changes to a colder (thicker) setting, recheck consistency again after the compressor has cycled off. When adjusting (counter-clockwise) to a thinner consistency, a large portion of product should be drawn from the dispense valve to reduce the product thickness below the new set point (adjustment). Then allow the freezer to refreeze product to the new setting.

Increase Thickness *(turn clockwise)*



Decrease Thickness *(turn counterclockwise)*

Figure I

CARE AND CLEANING

Cleaning and sanitizing frequency must be followed according to state and local health department regulations.
NOTE: Each time the freezer is disassembled, all internal components must be thoroughly washed and sanitized using procedures recommended by your local health department. In lieu of local department recommendations, use a three compartment sink; one compartment to wash parts in detergent, one compartment to rinse, and one to sanitize.
For units with internal autofill, see section on page 11 for instructions on cleaning and sanitizing the autofill system.

Drain and Rinse

1. If the freezer is empty, proceed to Disassembly and Cleaning. If there is product in the freezer, turn the front panel switch to “CLEAN”. On models using Remote Fill Control, (3341A and 3352 models), turn internal autofill “OFF” before draining.
2. Open the front dispensing valve and drain all product from the freezer. Close dispensing valve.
3. Remove the carb tube and pour water into the storage hopper. Allow the water to fill the freezing cylinder.

NOTE: Use approximately 2 1/2 gallons (10 liters) of cool water per barrel to rinse freezer.

4. Turn the freezer panel switch to “CLEAN” for 5 minutes.
5. Open the dispensing valve and drain the water from the freezer. Close valve.
6. Turn the freezer “OFF”.

Disassembly and Cleaning

NOTE: For cleaning and sanitizing before initial start-up, remove carb tube, dispense plunger, handle and spring from parts bag first.

1. Disassemble the dispensing valve assembly (figure J). Pull out valve handle retaining pin while supporting the valve plunger from the bottom (figure K). Push up on the valve plunger and remove the stainless handle (figure L). Slide the valve plunger and spring downward to remove (figure M).

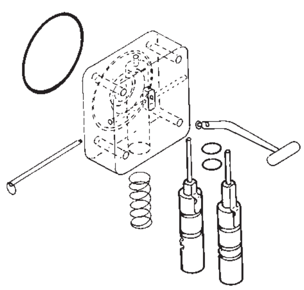


Figure J Disassemble Dispensing Valve

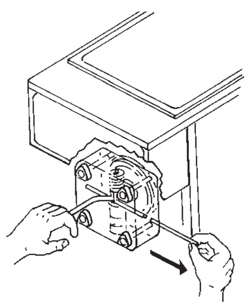


Figure K Remove Pin

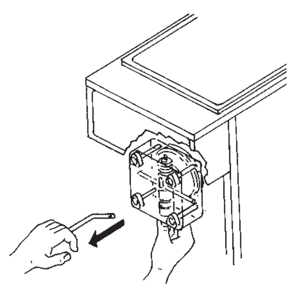


Figure L Remove Handle

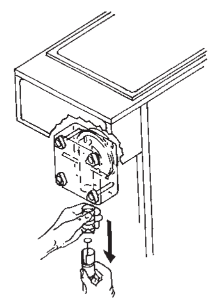


Figure M Remove Plunger and Spring

2. Remove knobs and carefully remove the front dispensing valve assembly, leaving the dasher assembly in the cylinder. Remove the plunger and valve body “O” Rings as shown in figure N.

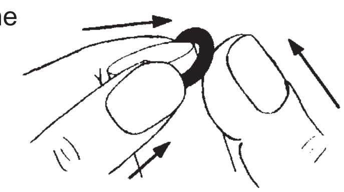


Figure N Ring Removal

NOTE: The best way to remove an o-ring is to first wipe off all of the lubricant using a clean paper towel. Pinch the o-ring upward with a dry paper towel between your index finger and thumb. When a loop is formed in the o-ring, roll it out of the groove with your other thumb. Always remove the o-ring farthest from the end of the plunger first. Carefully inspect the o-rings and replace if necessary.

3. Remove the dasher assembly from inside the freezing cylinder taking care to avoid damaging the rear seal assembly at the back of the freezing cylinder. Disassemble the dasher assembly by removing the stator rod and front and rear stator rod bearings.
4. Remove stationary half of the shaft seal assembly from the back end of the freezer cylinder. This is accomplished by reaching into the cylinder and pulling seal out with your index finger. (see Figure O).

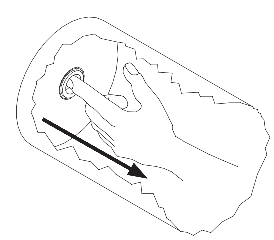


Figure O Installing the stationary portion seal

Disassembly and Cleaning (cont.)

5. Slide the rotary half of the seal off the dasher shaft. Inspect both seal components carefully for nicks or cracks. Replace seal if defective.

NOTE: To prevent leakage, the surfaces of the rotary seal and stationary seal must be smooth with no chips or cracks.

NOTE: All units are shipped with a standard ceramic seal (#W0340201) unless otherwise specified. Certain products contain a coconut oil with requires a different sealing material. For these products use the coconut oil seal (#W0340210). The stationary half of the standard seal has a white polished surface. The stationary half of the coconut oil seal has a glossy black surface.

6. Remove carb tube from bottom of hopper and remove o-rings. (see Figure P).
7. Remove drip tray and empty contents.
8. Take all components to the cleaning area.
9. Prepare 1 gallon solution of hot tap water and a good grade of dishwashing detergent.
10. Thoroughly wash all components in a warm, mild detergent solution, including the inside of the freezing cylinder and mix storage hopper. DO NOT WASH COMPONENTS IN A DISHWASHER.
11. Use a medium sized brush to clean the bottom of the valve body and the inside of the plunger bore with detergent solution taking care to remove all remaining lubricant (figure Q).
12. The exterior of the freezer should be cleaned as needed with a cloth towel.

> ⚠ **CAUTION:** Coarse rages, abrasive cleaners and excessive force can damage and/or scratch the surfaces of the freezer.

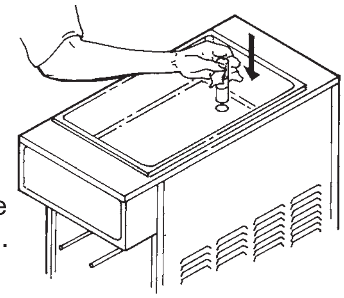


Figure P Carb Tube

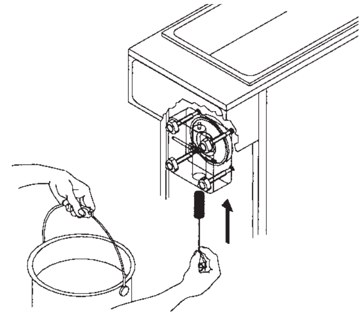


Figure Q Clean Valve Body

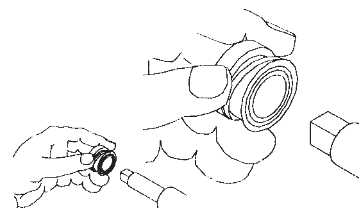


Figure R Re-assemble rotary portion of seal as shown

Reassembly

NOTE: Allow all parts to dry completely before reassembly.

1. Reassemble drip tray and install.
2. Wet the inner rubber lip of the rotary half of the seal and the back end of the dasher shaft with water. Slide rotary half of assembly onto the dasher shaft, RUBBER FIRST, with the smooth sealing surface toward the back of the dasher. (see Figure R). Be sure the rotary half is fully seated against the shoulder of the shaft.
3. Insert the stationary half of the seal into the ribbed rubber boot with the polished surface facing out (forward).
4. Lightly lubricate the ribbed rubber boot of the stationary ceramic seal, (taking care not to get any lubricant on the polished surface) and insert it straight back into the recess at the back of the freezing cylinder, RUBBER FIRST. (Figure S)

NOTE: The stationary half of the seal must be completely dry before reassembling. If the circular half of the seal is white, make sure that the grooved side is toward the rubber. If the circular half is black, be sure the glossy side is facing out.

5. Reassemble the dasher assembly, as shown in Figure T. Insert the larger front and smaller rear white plastic bearings into dasher, then slip in the stator rod.
6. **Carefully and slowly guide the dasher into the freezing cylinder, taking care not to damage the seal assembly.** Turn dasher shaft until it engages the square drive coupling. Slide the dasher back into the cylinder so that the two smooth sealing surfaces meet. (see Figure U)
7. Inspect and lightly lubricate the large square o-ring and refit it into the back of the valve block assembly. Install the valve assembly on the front studs and tighten the knobs until they are finger tight. Use a cross tightening pattern. ***Do not use tools to tighten knobs.***

NOTE: Failure to lightly lubricate the large o-ring before installing into the valve block can result in product leakage.

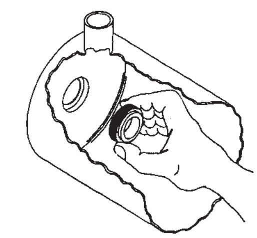


Figure S Installing the stationary portion seal

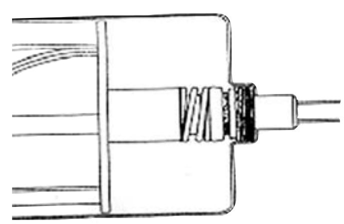


Figure T Seal Assembly installed correctly

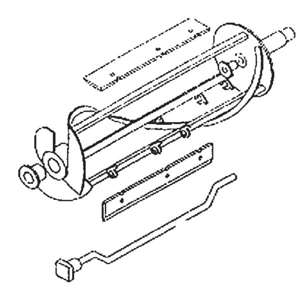


Figure U Dasher Assembly

Sanitizing and Refilling

1. Re-assemble carburetor assembly by installing the two “O” Rings at the bottom of the carb tube.
2. Place the carburetor assembly in the bottom of the hopper.
3. Install the “O” Rings on valve plunger and lay plunger assembly on a clean piece of paper towel.
4. Prepare a minimum of 2.5 gallons (9.5 liters) of sanitizing solution (Kay-5 Sanitizer/Cleaner or equivalent) following the manufacturer’s instructions.

NOTE: Add 1 ounce of Kay-5 to 2.5 gallons (9.5 liters) of 120ºF (50ºC) water to achieve a concentration of 100 parts per million.

5. Dip a medium sized brush into the sanitizing solution and sanitize the inside bore of the dispensing valve (figure V).
6. Place a small amount of lubricant onto a piece of clean paper toweling (figure W). Use a clean piece of paper toweling to pick up the small end of the valve plunger assembly. Apply a thin film of lubricant from the other piece of paper toweling to the “O” Rings on the valve plunger assembly (figure W).
7. Slide the valve plunger spring over the small end of the valve plunger and, using another clean piece of paper toweling, pick up the valve plunger at the outlet end and insert plunger and spring into the valve body (figure X).
8. Push up on the valve plunger and insert the stainless steel handle (figure Y).
9. Holding the handle down slightly so that the hole in the handle and valve block are aligned, insert the dispensing valve handle retaining pin (figure Z).
10. Pour sanitizing solution into the mix storage hopper and allow the solution to fill freezing cylinder. Use a large brush to sanitize all hopper surfaces (figure AA).
11. Turn panel switch to “CLEAN” and allow freezer to run for 10 minutes.
12. Open dispensing valve and drain solution. Allow the dasher to push remaining sanitizer out of the freezing cylinder. Once the sanitizing solution is drained, turn panel switch to “OFF”.
13. Place a small amount of sanitary lubricant onto another piece of clean paper toweling. Use a clean piece of paper toweling to pick up the large end of the carburetor from the bottom of the hopper taking care not to touch the sanitized carburetor with your bare hand. Apply the lubricant on the other piece of paper toweling to the two “O” rings on the bottom of the carburetor assembly.
14. Place the lubricated carburetor assembly on a clean piece of paper toweling.
15. Prepare fresh product according to manufacturer’s instructions.
16. Hold open the dispensing valve, and pour product (approx. 10 oz.) into the hopper to allow this product to chase out any remaining sanitizer. Watch the product flowing out of the dispensing valve and close the valve when the new mix has purged the sanitizer remaining in the cylinder.
17. Fill mix storage hopper with fresh product.
18. Use a clean piece of paper toweling to insert the sanitized carburetor assembly into the inlet hole in the hopper. Cover hopper with hopper lid.
19. Turn front panel switch to “ON”. Allow freezer to reach proper consistency.

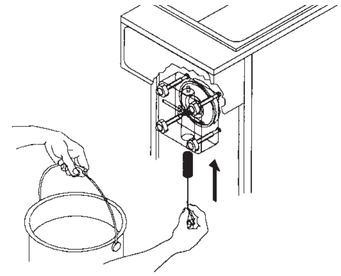


Figure V Sanitize Valve Body

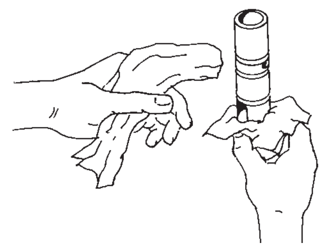


Figure W Lubricate Plunger

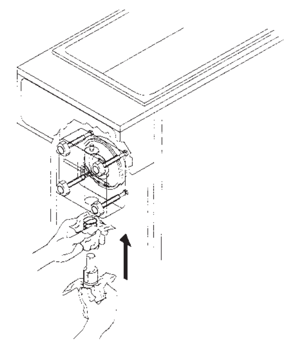


Figure X Installing Plunger and Spring

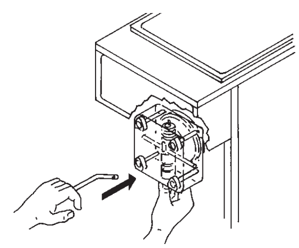


Figure Y Insert Valve Handle

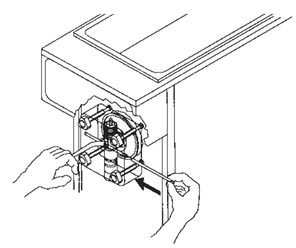


Figure Z Insert Retaining Pin

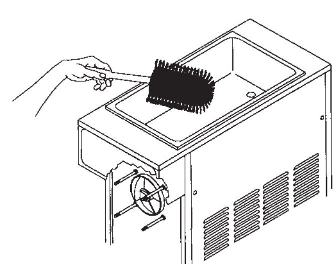


Figure AA Sanitize Hopper

Clean-In-Place Procedure (Daily Cleaning)

This equipment has been approved for a Clean-In-Place procedure that does not require complete disassembly on a daily basis. The unit still requires regular complete disassembly for cleaning and sanitizing. To perform the C-I-P procedure follow the instructions below:

1. Empty any product in the machine and turn to OFF.
2. Disassemble the dispensing valve assembly following the instructions in Disassembly and Cleaning.

NOTE: Leave the valve block in place. Only disassemble the plunger, handle, spring, o-rings and pin.

3. Remove carburetor assembly from hopper and remove o-rings.
4. Take all components to the cleaning area.
5. Carefully inspect the o-rings for cracks, chips or cuts and replace if necessary.
6. Prepare 1 gallon solution of hot tap water and a good grade of dishwashing detergent.
7. Thoroughly wash all parts including handle, pin, valve plunger, spring, carburetor assembly and all o-rings in detergent solution.
8. Use a medium sized brush to clean the bottom of the valve body and the inside of the plunger bore with detergent solution taking care to remove any remaining lubricant.
9. Reassemble and sanitize unit following the instructions under Sanitizing and Refilling.

NOTE: Run the unit with sanitizer on “CLEAN” for 20 minutes before draining and refilling.

Cleaning/Sanitizing Internal Autofill (Model 3341A and 3352 Only)

Remote Pump Sanitizing

The BRIX pump does not require any maintenance. However, depending on the concentrate type and it’s manufacturers requirements, the pump and **ALL** equipment in the system will need periodic sanitizing. ***The frequency of this procedure is dependent on the water condition, temperature and product type.*** Some concentrates may contain exceptionally “stringy” pulp that may become lodged within the BIB and/or dispenser valve inhibiting performance. If concentrates of this kind are used, the system may need more frequent sanitizing to flush out build-up. WIth a “Teed” or pre-mixed system it is recommended that the intervals between sanitizing be more frequent than post-mix systems. The reason for this is that when a concentrate is mixed with water, it may increase the possibility of product spoilage.

NOTE: The following procedure must be followed to assure compliance of NSF listed sanitizing requirements for the SHURflo BRIX pump (*only*). ***It is recommended that the sanitizing instructions provided with the BRIX pump installed be followed.*** This procedure will not flush and sanitize the concentrate outlet line between the 3-way valve and dispenser. To properly sanitize the concentrate line, repeat the procedure in the “Dispense” mode and perform a product purge of the system.

Materials Required

1. **Non-sudsing liquid** detergent (such as common household automatic dishwasher liquid detergent)
2. Household bleach (Sodium Hypochlorite solution; 5.25%) or equivalent.
3. Clean 5 gal. (19 L) bucket
4. Measuring cup
5. An adapter is needed to hold the QCD (BIB) fitting on the concentrate suction line open. A connector cut from an empty bag will work.

Sanitizing Procedure

1. Fill the bucket with 4 gal. (15.14 L) of warm water 120ºF – 180ºF (48ºC – 82ºC).
2. Measure 4 oz. (1/4 cup) (118cc) of the liquid detergent and add to the water.
3. Measure 2 oz. (1/8 cup) (60cc) of bleach and add to the water, then stir, mixing evenly.

NOTE: 1/2 oz. (15cc) of bleach per gallon (3.8 L) of water yields a solution of approximately 200 ppm Sodium Hypochlorite needed to satisfy NSF sanitizing requirements.

4. Disconnect the concentrate line from the BIB and install the adapter on the quick disconnect so the line is open to the sanitizing solution. Place concentrate inlet line into the bucket so that the Q.C.D. will stay at the bottom.
5. Position the SHURflo sanitizing valve in the "**SANITIZE**" mode. Open the dispenser valve allowing **ALL** the solution to be pulled through the Q.C.D. fitting into the BRIX pump and out the water outlet line through to the dispenser.
6. When the bucket is empty (approx. 15 min.), return the valve to the "**DISPENSE**" mode.
7. **Product Purge:** Reconnect Q.C.D. of the inlet line to the concentrate supply. Open the dispenser allowing the pump to operate until all sanitizing solution is purged from the system, assuring that no off-taste will be detected. Allowing the pump to operate until all sanitizing solutions is purged from the system, assuring that no off taste will be detected.

MAINTENANCE

⚠ **WARNING: Disconnect power for maintenance. Do not attempt to perform maintenance on the freezer until electrical power has been disconnected.**

Suggested Daily Maintenance

1. Clean, lubricate and sanitize the freezer following guidelines.
2. Clean the exterior of the freezer using a soft wet cloth. (Wipe down spinner if attached)
3. Empty drip tray.

Parts Replacement Schedule

Part Description	Monthly	Every 3 Months	Every 6 Months	Annually	Quantities to be Replaced
Shaft Seal (W0340201 or W0340210)				Replace	1
Drive Shaft (W0451067)				Inspect & replace if necessary	1
Drive Belts (W0450209)				Inspect & replace if necessary	1
Scraper blades on dasher (W1431084)			Replace		2
Square cut o-ring on valve body/face plate (W0340055)				Inspect & replace if necessary	1
Front stator flange bearing (W0430032)				Replace	1
Rear stator flange bearing (W0430024)				Replace	1
Dispense valve o-rings (W0340022)		Replace			Thick Product Plunger: 2 Standard Product Plunger: 3
Carb tube o-rings (W0340011)		Replace			2 or 3

Refer to the Crathco Parts Price List when ordering the above parts

How to Adjust Belt

⚠ **CAUTION: Unplug the machine before performing any adjustments. This procedure must be done by a qualified technician.**

Check the belt tension. The proper belt deflection is 1/2" over all. If the deflection is more than 1/2" the motor will need to be lowered. If the deflection is less than 1/2", the motor will need to be raised. Follow this procedure to adjust the motor to achieve proper belt tension. (see Figure BB)

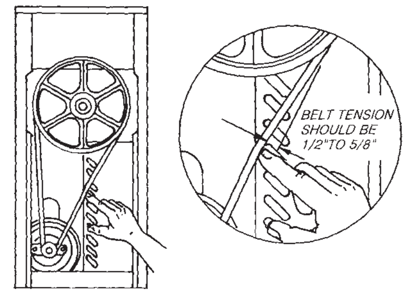


Figure BB

1. Unplug the machine and remove both side and rear panels.
2. Locate the motor flange bearings. These are the side mounted bearings that hold the motor to the cradle. The motor is double shafted and the shaft extends through a bearing on each end. The bearing is held to the motor cradle by two allen bolts on each bearing.
3. Loosen the allen bolts on each bearing. Do not loosen the setscrews that hold the bearing collar to the motor shaft.
4. Lower the motor or raise the motor as needed. The motor must be kept level from front to back. Do not lower or raise only one end of the motor. This will result in excessive belt wear and belt noise.
5. Tighten all four allen bolts down. Align the motor pulley with the top pulley if needed.
6. The motor pulley should be in alignment with the large (driven) top pulley. Use a straight edge along the top pulley.
7. If the pulleys are not in alignment, loosen the setscrew on the motor pulley and move either in or out as needed.
8. Tighten the setscrew back down on the motor shaft (use of non-permanent loc-tite is recommended). Please be sure the setscrew is tightened down on the flat surface of the motor shaft.
9. Return the unit back to service.

How to Change Back Lit Sign Merchandiser Bulb

1. Remove the two screws, located on the top of either side of the sign.
2. Lower the metal enclosure that frames the merchandiser insert.
3. Pull merchandiser enclosure down and out.
4. Replace bulb inside.
5. Reassemble. For ease of assembly, put merchandiser in light box before placing metal enclosure back on.

Preventative Maintenance Procedure (Every 6 to 12 Months)

A preventative maintenance visit should be performed every 6 to 12 months depending on the usage and environment where the unit is placed. (Ex. seasonal machines – once before season, year round machines – twice per year). The following procedures should be performed during a preventative maintenance visit. This does not take the place of daily care and cleaning procedures as described by local health codes and the manual. PM kit #W0890157 contains the standard replacement parts needed for preventative maintenance including o-rings, standard seal kit stator bearings and drive belt. Units with a coconut oil product seal should order all parts separately. Units with scraper blade dasher will require the scraper blades be ordered separately.

- Verify ventilation is adequate (Air-cooled units: 6" minimum on both sides, open at top, and as far as possible from dust sources; Water-cooled units: 0" on both sides, 3-6" at rear of unit and open at top).
- Verify adequate water flow and drain connections on water-cooled versions.
- Check product temperature and consistency for proper setting (refer to product manufacturer's recommendation) – adjust if necessary. Where equipped be sure to check the temperature in both the hopper and cylinder.
- Ensure product is being mixed properly and is within specification (check brix – most products should be around 13% – refer to product manufacturer's recommendations for exact recommended brix).
- Check for any leaks.
- Empty product from the unit. Disassemble unit completely (as if for cleaning).
- Clean and sanitize all disassembled parts following the cleaning instructions in the manual.
- Clean and sanitize hopper, freezing cylinder and splash zones on the machine.
- Check condition of all panels and lids – replace if necessary.
- Check dasher scraper blades for wear if equipped – replace once per year minimum.
- Check dasher for signs of wear – replace if necessary. Verify alignment when replacing.
- Check valve body gasket for wear – replace once per year minimum.
- Check valve body knobs (used to hold valve body in place) – replace if necessary.
- Check condition of shaft seals and stator bearings – replace once per year minimum.
- Inspect drip cup at back end of freezing cylinder for signs of seal leakage.
- Replace o-rings on hopper float (where necessary), dispense valves and carb tubes (lubricate).
- Lubricate parts where appropriate (dispense valve o-rings, carb tube o-rings, rubber boot of stationary shaft seal).
- Re-assemble unit and sanitize hopper and freezing cylinder by running CLEAN cycle.
- Clean and sanitize spinner if equipped.
- Check operation of merchandiser and mode lights – replace light bulbs if necessary.
- Clean reusable filter if equipped. Check condition of filter and replace if necessary.
- Clean condenser.
- Inspect the drive shaft and motor shaft bearings for excessive wear (drive shaft hole rounding out) – replace if necessary. Verify alignment when replacing.
- Check V-belt tension (should be 1/2" – 5/8") and verify all set screws are tightened – adjust if out of range. Replace belt once per year minimum.
- Verify compressor operation and freezer controller operation.
- Check electrical connections (outlet should be properly grounded with amperage capacity equal to or over the amperage specified on the serial tag).
- Check fan operation (condenser fan) and clean fan blades if necessary.
- Review proper periodic care and cleaning instructions (disassembly, cleaning, sanitizing, lubrication, and re-assembly) with store personnel. Train store personnel to follow proper procedures (stress importance of store level maintenance ie. lubrication, filter cleaning, etc.).
- Make sure store personnel have appropriate supplies (lubricant, cleaning brushes and sanitizer) to care for machine.

TROUBLESHOOTING GUIDE

Freezer problems can originate from three sources: improper operation, mix problems or mechanical malfunction. Always check first for improper operation and mix problems before calling a service technician.

Caution: Always disconnect power before attempting any maintenance procedures.
Only a qualified service technician should perform electrical and mechanical adjustments or repairs.

Problem	Possible Cause	Solution
Machine will not run or freeze down	• Machine not plugged in • Circuit breaker tripped or fuse blown • Machine in "CLEAN" or "OFF" position • Dasher or scraper blades not installed • Sequencer failure • Low refrigerant	• Plug in machine • Reset circuit breaker or replace fuse • Turn switch to "ON" position • Install dasher assembly • Replace • Check for leaks
Product too soft	• Consistency setting too loose • Product BRIX level too high • Consistency setting at maximum (red spring)	• Re-adjust consistency setting • Lower liquid product BRIX level • Change to yellow spring
Product too stiff	• Consistency adjuster set too firm • Product BRIX level too low	• Re-adjust consistency setting or change to red spring • Increase product BRIX level
Product will not dispense	• Power switch "OFF" • Inadequate mix in hopper Red MIX LOW light on. • Consistency set too firm • Carburetor inlet hole clogged • Drive belt broken or off pulley • Drive shaft worn • Drive motor failure	• Turn power switch "ON" • Refill hopper • Readjust consistency setting • Unclog carburetor inlet hole • Repair and replace • Inspect square drive shaft pocket for excessive wear, replace • Replace motor
Leakage from drip tube, front of freezer	• Worn out or defective drive shaft seal • Seal installed incorrectly	• Replace seal and then lubricate at each cleaning • Remove and re-install seal
Excessive dispensing valve leakage	• Worn or defective O-Ring(s)	• Replace and lubricate
Clicking sound from inside machine	• Low voltage extension cord being used	• Use dedicated circuit with proper rating • Connect directly to power source
Merchandiser light flickers or goes out when compressor starts	• Low voltage	• Use dedicated circuit with proper rating
Thumping sound from inside machine	• Worn belt • Worn scraper blades	• Replace belt • Replace scraper blades
Premature seal wear	• Incorrect installation of dasher • Improper drive shaft clearance • Incorrect shaft alignment	• Advise careful installation • Adjust to proper clearance • Align shaft

if you still need help, call our service department at (800) 695-4500 (USA & Canada only) or (502) 425-4776 Monday through Friday, 8 am – 6 pm EST or an authorized service center in your area. Please have the model and serial numbers ready so that accurate information may be given.

Prior authorization must be obtained from Grindmaster Corporation Technical Services Department for all warranty claims.

CHECK LIST

- ☐ 1 **Stationary Seal Rubber Part** (lubricate)
- ☐ 2 **Stationary Seal Ring**
- ☐ 3 **Spring Seal**

Coconut Oil Seal (W0340210) and Standard Seal (W0340201) include 1,2, & 3.

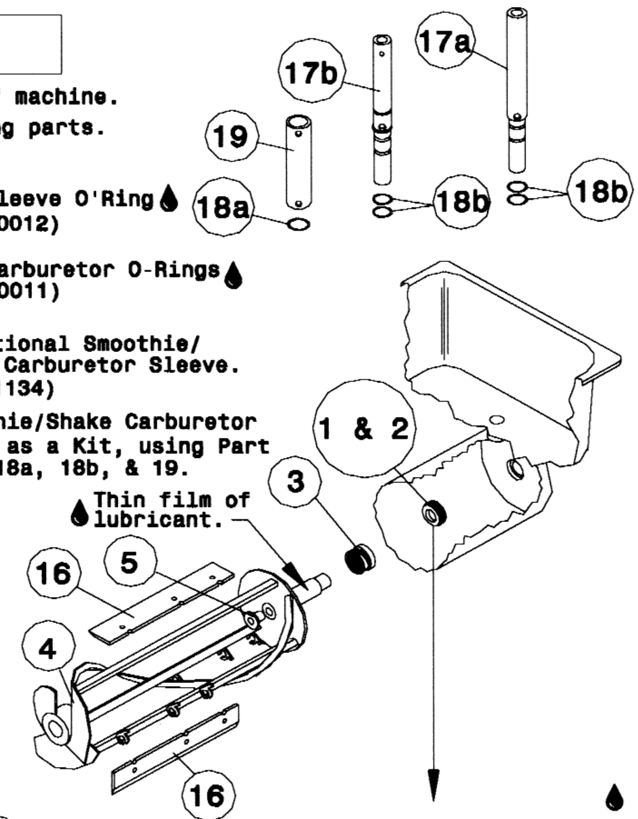
- ☐ 4 **Dasher** (W0430026)
  Scraper Blade Dasher (W0430089)
- ☐ 5 **Plastic Rear Bearing (W0430024)**
- ☐ 6a **Plastic Front Bearing Standard (W0430032)**
- ☐ 7 **Stator Rod (W0430028)**
- ☐ 8 **Face Plate Quad Ring (W0340055)**
- ☐ 9 **Valve Body (W0480450)**
- ☐ 10 **Valve Knobs (W0630711)**
- ☐ **11a** Slush Plunger (W0480438) (lubricate)
- ☐ **11b** Thick Product Plunger (W0480451) (lubricate)

PARTS IDENTIFICATION

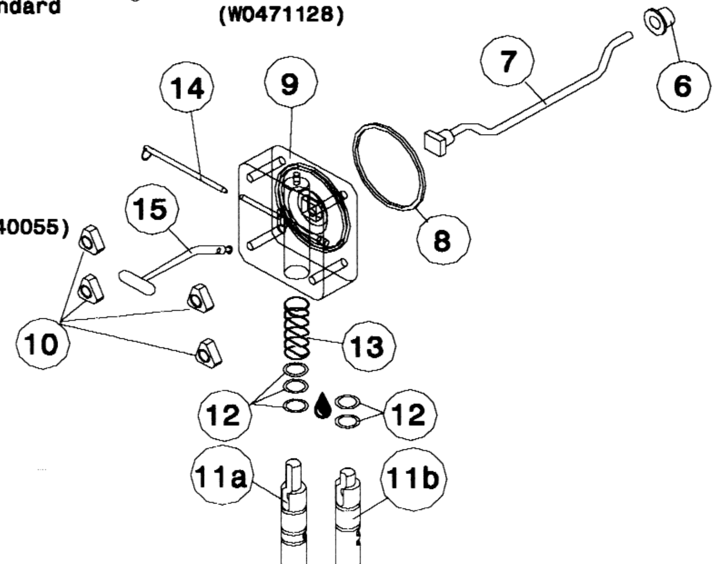
Do not cover ventilation grill on sides of machine.
Read equipment instructions before handling parts.

- ☐ **12 Plunger O-Rings (W0340022)** (lubricate)
- ☐ **13 Plunger Spring (W0631242)**
- ☐ **14 Valve Pin (W0611728)**
- ☐ **15 Valve Handle (W0480445)**
- ☐ **16 Scraper Blade (W1431084)**
  Use with scraper blade dasher
- ☐ **17a Standard Carburetor (W0471076)**
- ☐ **17b Optional Smoothie/ Shake Carburetor. (W0471128)**
- ☐ **18a Sleeve O'Ring (W0340012)** (lubricate)
- ☐ **18b Carburetor O-Rings (W0340011)** (lubricate)
- ☐ **19 Optional Smoothie/ Shake Carburetor Sleeve. (W0471134)**

Optional Smoothie/Shake Carburetor comes together as a Kit, using Part numbers, 17b, 18a, 18b, & 19.



Thin film of lubricant. (lubricate)

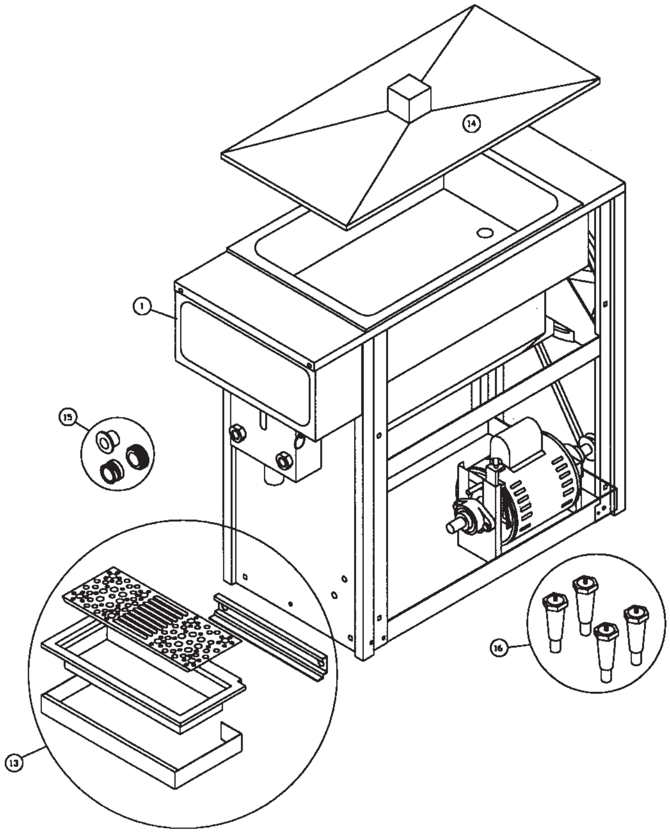


Add o-rings to plunger first, then lubricate plunger and o-rings. (lubricate)

(lubricate symbol) **= Lubricate**

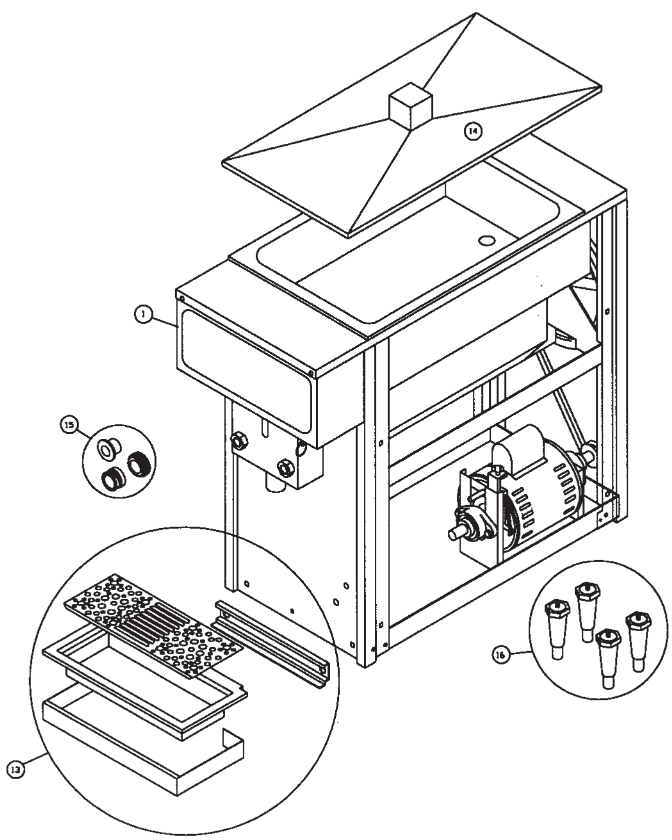
Assemble first, lubricate, then insert into freezing cylinder.

Exploded View Model 3341 Final Assembly



Item	Part Number	Description
1	W0150570	Stock Assembly
2	W0600224	Owners Manual
3	W0600005	Serial Label
4	W0660060	Plastic Shipping Bag
5	W0600121	Header Installation Instr. Sheet
6	W0600073	Caution Rubber Mat
7	W0631903	Sanitizer Packets
8	W0600159	Warranty Card
9	W0800120	Base Board Assembly
10	W0800121	Shipping Box
11	W0800122	L-Block
12	W0800124	Foam Top Carton Pad
13	W0890218	Drip Pan Kit
14	W0520094	Hopper Cover
15	W0890187	Standard Seal Kit
16	W0890220	Adjustable Leg Kit

Exploded View Model 3341A Final Assembly

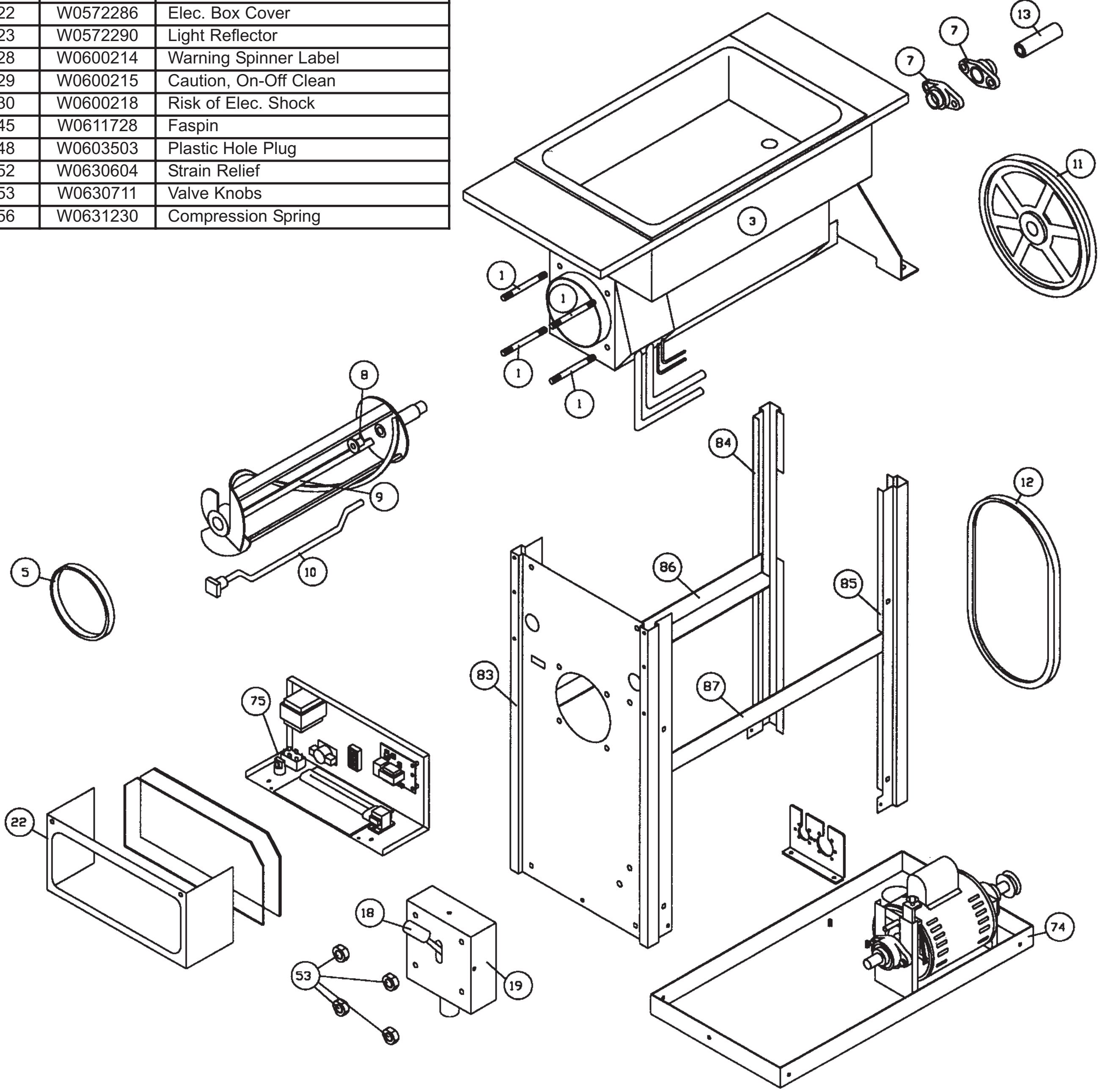


Item	Part Number	Description
1	W0150564	Stock Assembly
2	W0600224	Owners Manual
3	W0600005	Serial Label
4	W0660060	Plastic Shipping Bag
5	W0600121	Header Installation Instr. Sheet
6	W0600073	Caution Rubber Mat
7	W0631903	Sanitizer Packets
8	W0600159	Warranty Card
9	W0800120	Base Board Assembly
10	W0800121	Shipping Box
11	W0800122	L-Block
12	W0800124	Foam Top Carton Pad
13	W0890218	Drip Pan Kit
14	W0520094	Hopper Cover
15	W0890187	Standard Seal Kit
16	W0890220	Adjustable Leg Kit

Exploded View Model 3341 Stock Assembly

Item	Part Number	Description
1	W0110013	Valve Stud (New Style)
3	W0201263	Evaporator Foam Assy.
4	W0340022	#213 O-Ring
5	W0340055	Square Cut O-Ring
6	W0340058	Barrel Gasket
7	W0380025	Flange Bearing
8	W0430024	Blind Flange Bearing
9	W0430089	Dasher Weldment
10	W0430028	Stator Weldment
11	W0450053	10" Pulley
12	W0450209	V-Belt
13	W0451067	Slush Drive Shaft
14	W0470010	Rubber Pad
15	W0470076	Lubrifilm
17	W0471076	Carburetor Assembly
18	W0480445	Valve Handle
19	W0480450	Valve Body
21	W0572068	Power Supply Cord
22	W0572286	Elec. Box Cover
23	W0572290	Light Reflector
28	W0600214	Warning Spinner Label
29	W0600215	Caution, On-Off Clean
30	W0600218	Risk of Elec. Shock
45	W0611728	Faspin
48	W0603503	Plastic Hole Plug
52	W0630604	Strain Relief
53	W0630711	Valve Knobs
56	W0631230	Compression Spring

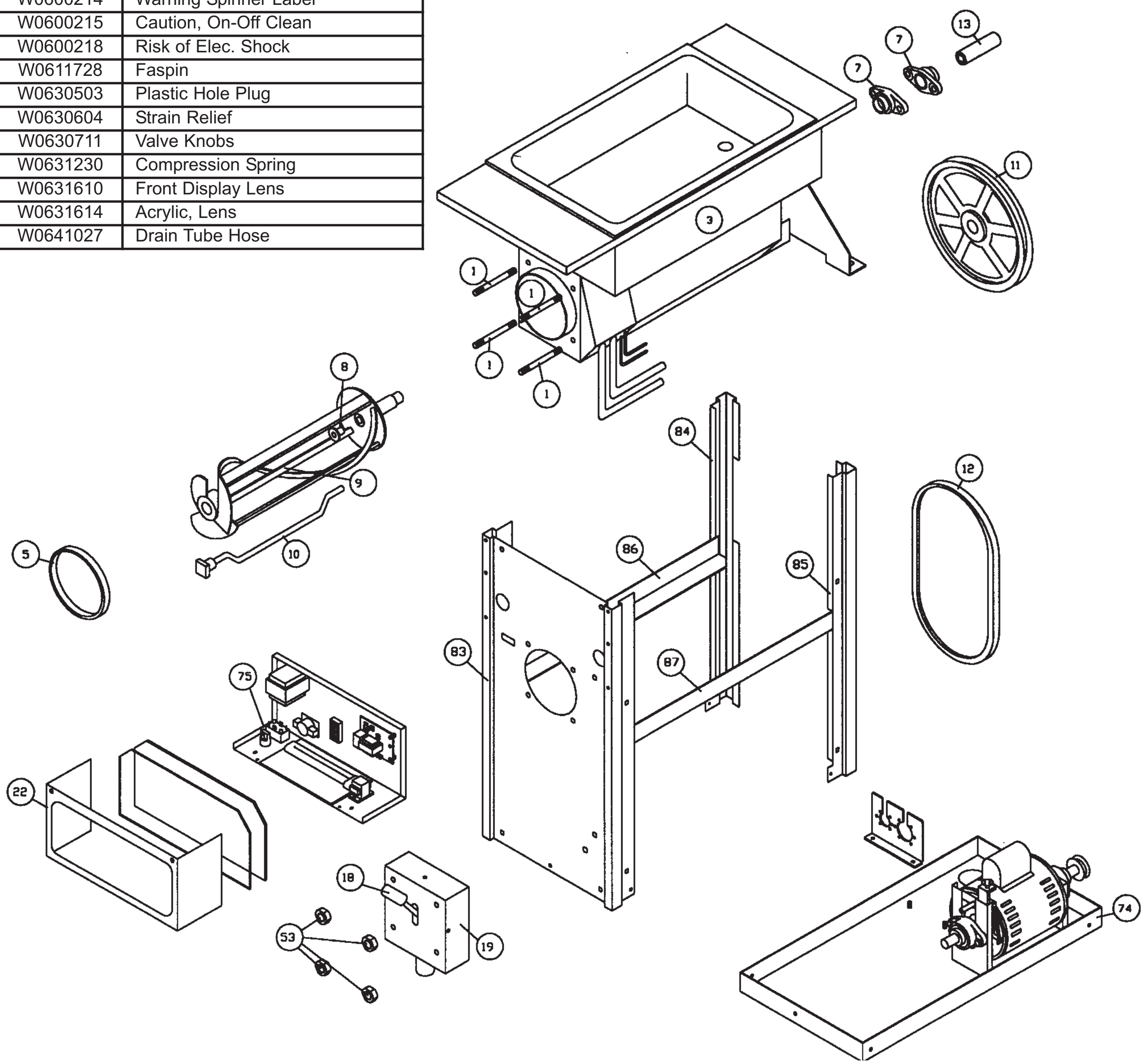
Item	Part Number	Description
57	W0631610	Front DIsplay Lens
58	W0631614	Acrylic Lens
59	W0641027	Drain Tube Hose
74	W0210139	Base Assembly
75	W0572311	Elec. Box Assy.
82	W0211112	Drain Tube Fitting
83	W0210084	Front Panel
84	W0210085	L.H. Rear Leg
85	W0210086	R.H. Rear Leg
87	W0210105	Center Shelf Angles
88	W0890000	Drip Pan Kit
89	W0200312	Filter Drier
90	W0650029	Solenoid Valve
94	W0340007	Floating O-Ring
95	W0470941	Float
101	W1431084	Scraper Blade
102	W0570045	Ballast



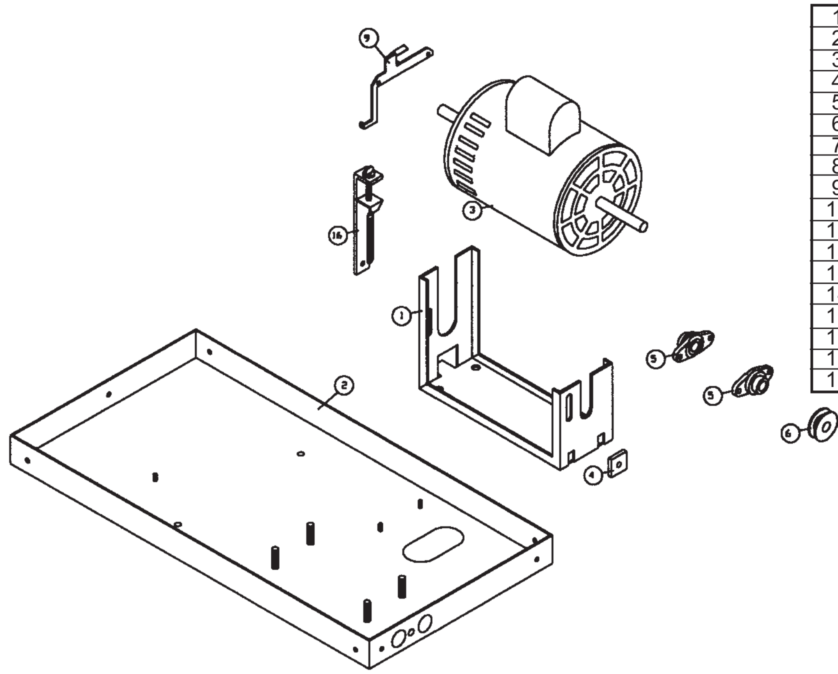
Exploded View Model 3341A Base Assembly

Item	Part Number	Description
1	W0110013	Valve Stud (New Style)
3	W0201342	Evaporator Foam Assy.
4	W0340022	#213 O-Ring
5	W0340055	Square Cut O-Ring
6	W0340058	Barrel Gasket
7	W0380025	Flange Bearing
8	W0430024	Blind Flange Bearing
9	W0430089	Dasher Weldment
10	W0430028	Stator Weldment
11	W0450053	10” Pulley
12	W0450209	V-Belt
13	W0451067	Slush Drive Shaft
14	W0470010	Rubber Pad
15	W0470076	Lubrifilm
17	W0471076	Carburetor Assembly
18	W0480445	Valve Handle
19	W0480450	Valve Body
20	W0570901	Mercury Switch
21	W0572068	Power Supply Cord
22	W0572286	Elec. Box Cover
23	W0572290	Light Reflector
28	W0600214	Warning Spinner Label
29	W0600215	Caution, On-Off Clean
30	W0600218	Risk of Elec. Shock
45	W0611728	Faspin
48	W0630503	Plastic Hole Plug
52	W0630604	Strain Relief
53	W0630711	Valve Knobs
56	W0631230	Compression Spring
57	W0631610	Front Display Lens
58	W0631614	Acrylic, Lens
59	W0641027	Drain Tube Hose

Item	Part Number	Description
74	W0210139	Base Assembly
75	W0572310	Elec. Box Assy.
82	W0211112	Drain Tube Fitting
83	W0210084	Front Panel
84	W0210085	L. H. Rear Leg
85	W0210086	R. H. Rear Leg
87	W0210105	Center Shelf Angles
89	W0200312	Filter Drier
90	W0572360	Mix Low Probe Washer
91	W0572361	Mix Low Probe Standoff
92	W0572365	Mix Low Probe
94	W0165005	Solenoid
97	W0650050	Circuit Board
98	W0570910	Toggle Switch
99	W0650033	Asco Solenoid Valve
100	W0600180	Autofill Label
101	W0620350	Autofill Tube Connector
102	W0210002	Autofill Solenoid Bracket
103	W0952006	Autofill Tube Assy.
122	W0630426	Detiker Clamp
128	W1431084	Scraper Blade

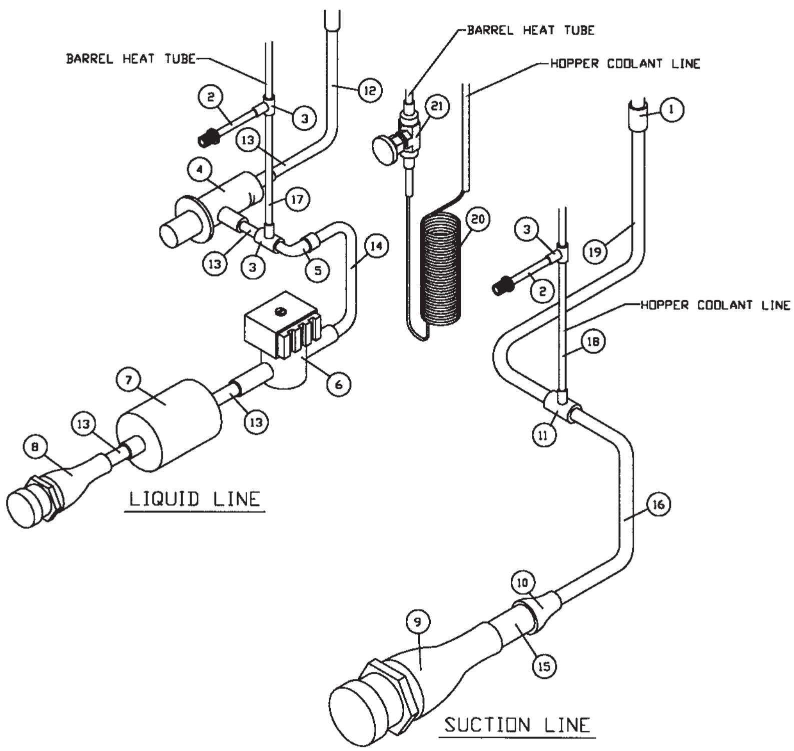


Exploded View Models 3341/3341A Motor Assembly



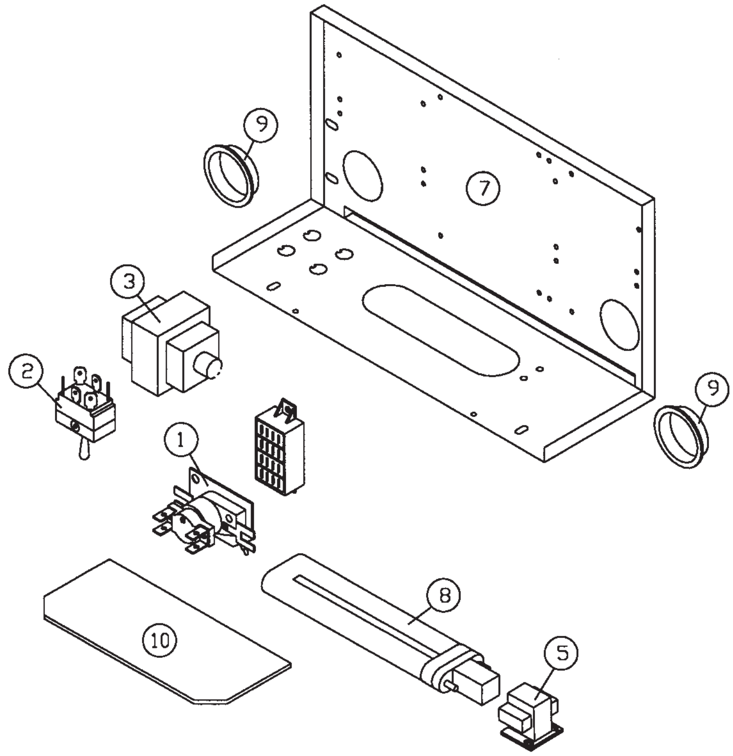
Item	Part Number	Description
1	W0210169	Motor Cradle
2	W0210143	Frame Bottom Plate
3	W0321022	Drive Motor
4	W0321013	Motor Adj. Nut
5	W0380009	Flange Bearing
6	W0451000	Pulley
7	W0610110	#8 x 3/8 Pan Hd.
8	W0610264	10-24 x 1/4 Truss Hd.
9	W0321025	Motor Stop Bracket
10	W0611055	10-24 Hex Nut
11	W0611074	1/4-20 Hex Nut
12	W0611082	5/16 -18 Flange Nut
13	W0611235	3/16 Flat Washer
14	W0611246	1/4 Lockwasher
15	W0671022	Sound Insulation (Motor)
16	W0170014	Consist. Control Assy.
17	W0610559	Socket Hd. Cap Screw
18	W0611248	1/4 Lockwasher

Exploded View Models 3341/3341A Base Assembly Refrigeration

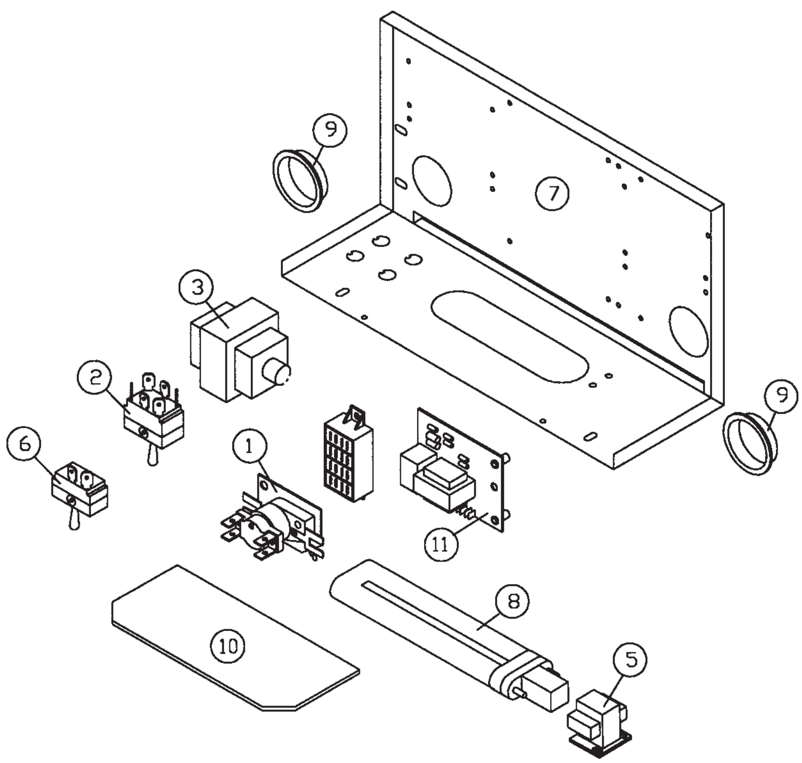


Item	Part Number	Description
1	W0620125	1/2” Copper Couple
2	W0650501	Access Valve
3	W0620109	3/8 x 3/8 x 1/4 Tee
4	W0650104	Automatic Exp. Valve
5	W0620107	3/8” Street Elbow
6	W1650005	Solenoid Valve
7	W0200312	Filter Drier
8	W0620117	3/8” Quick Disconnect
9	W0620118	3/8” Quick Disconnect
10	W0620132	5/8 x 1/2 Reduction Fitting
11	W0620121	1/2 x 1/2 x 1/4 Tee
12	W0201136	Liquid Line
13	W0201135	Liquid Line
14	W0201134	Liquid Line
15	W0201145	Suction Line
16	W0201138	Suction Line
17	W0471147	Hopper Coolant Line
18	W0471147	Hopper Coolant Line
18	W0201137	Suction Line
21	W0650116	Capillary Tube
22	W0650416	Needle Valve

Electrical Box Model 3341

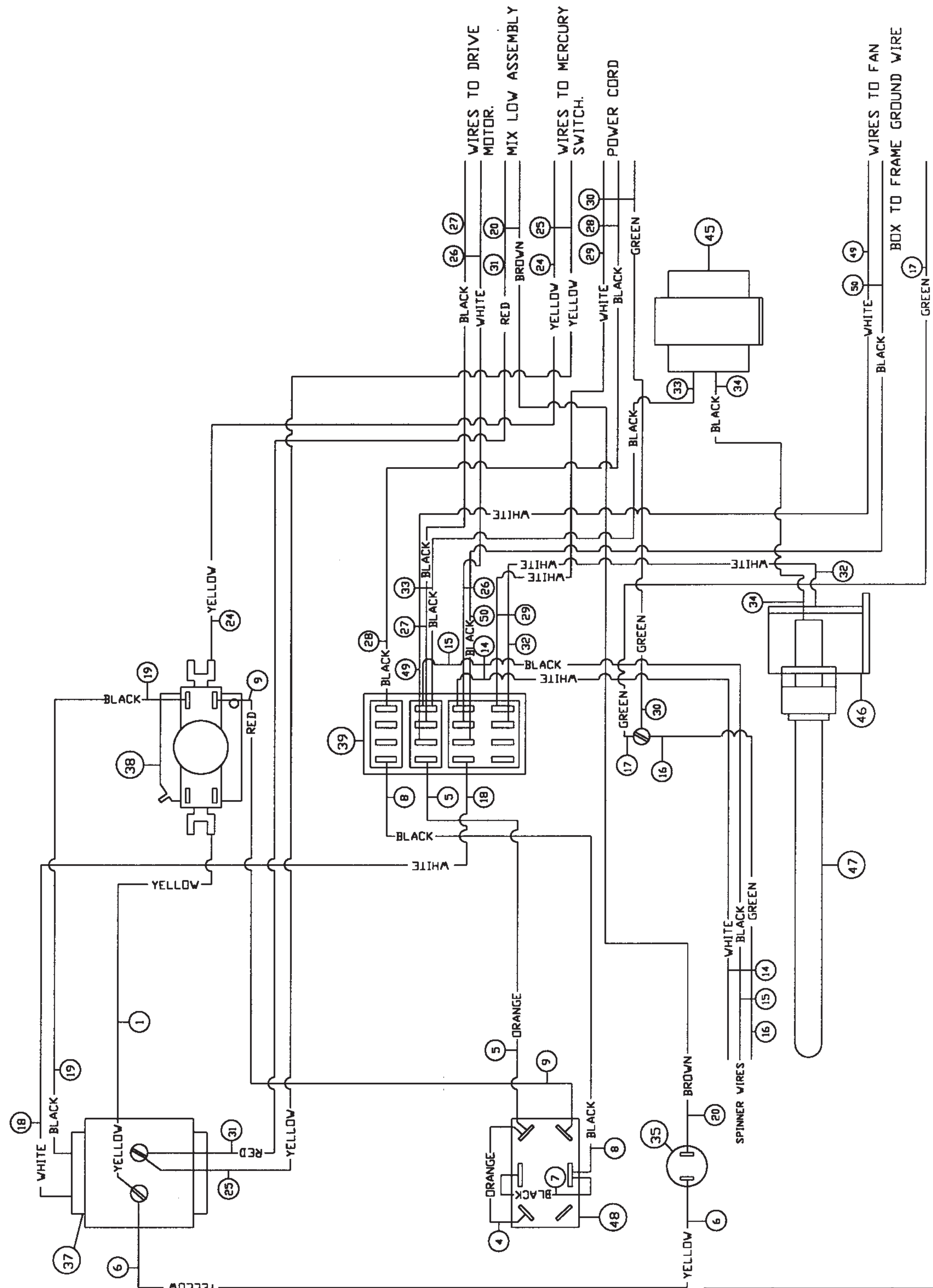


Electrical Box Model 3341A



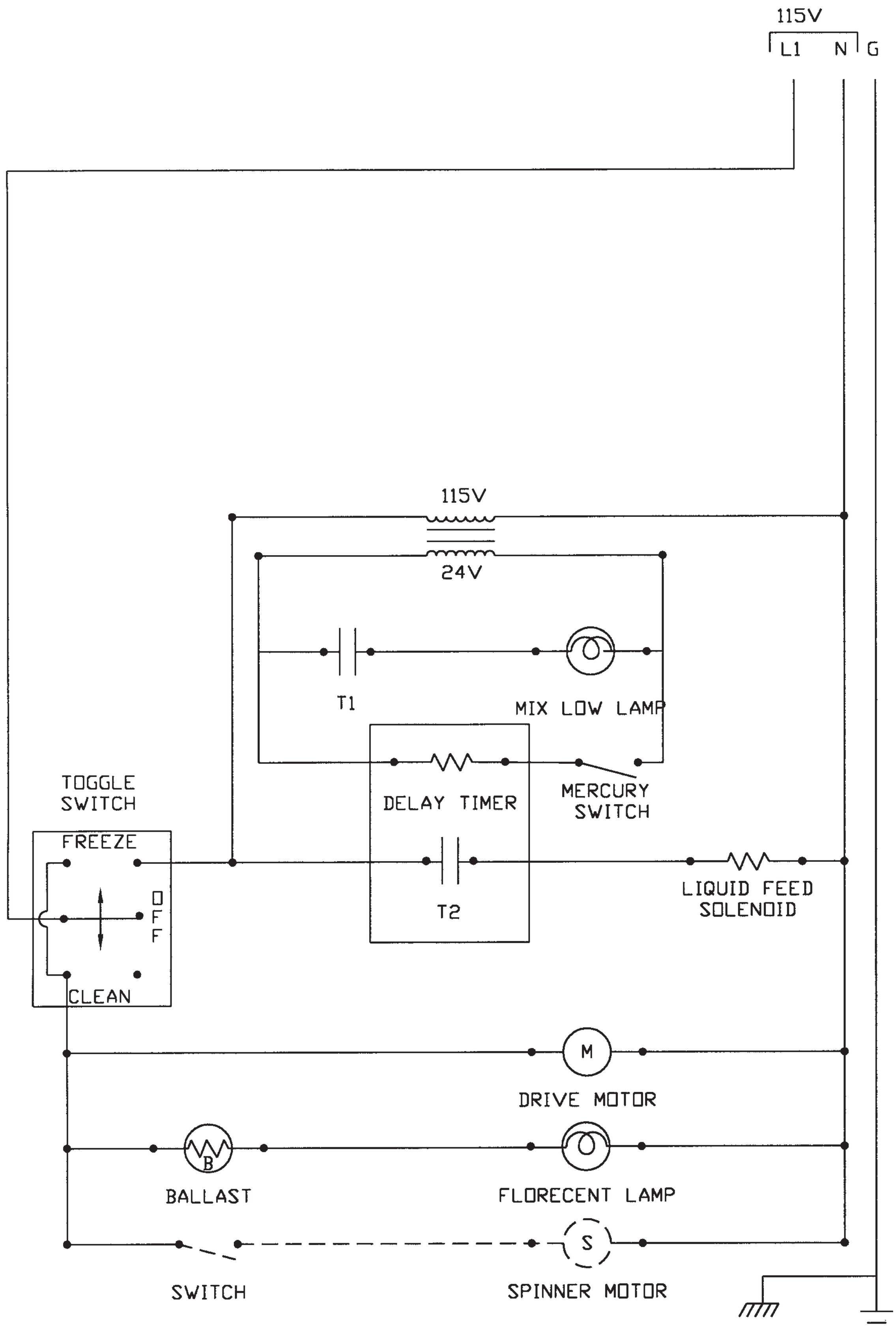
Item	Part Number	Description
1	W0570660	Sequencer
2	W0570924	Toggle Switch
3	W0572032	Transformer
4	W0570235	Terminal Block
5	W0570044	Light Socket
6	W0570910	Toggle Switch, Autofill
7	W0572289	3341 Elec. Box
8	W0570043	Light Bulb
9	W0630008	Heyco Bushing
10	W0631606	Elec. Box Lens
11	W0650050	Liquid Level Control (3341A only)

Model 3341 Wiring Diagram

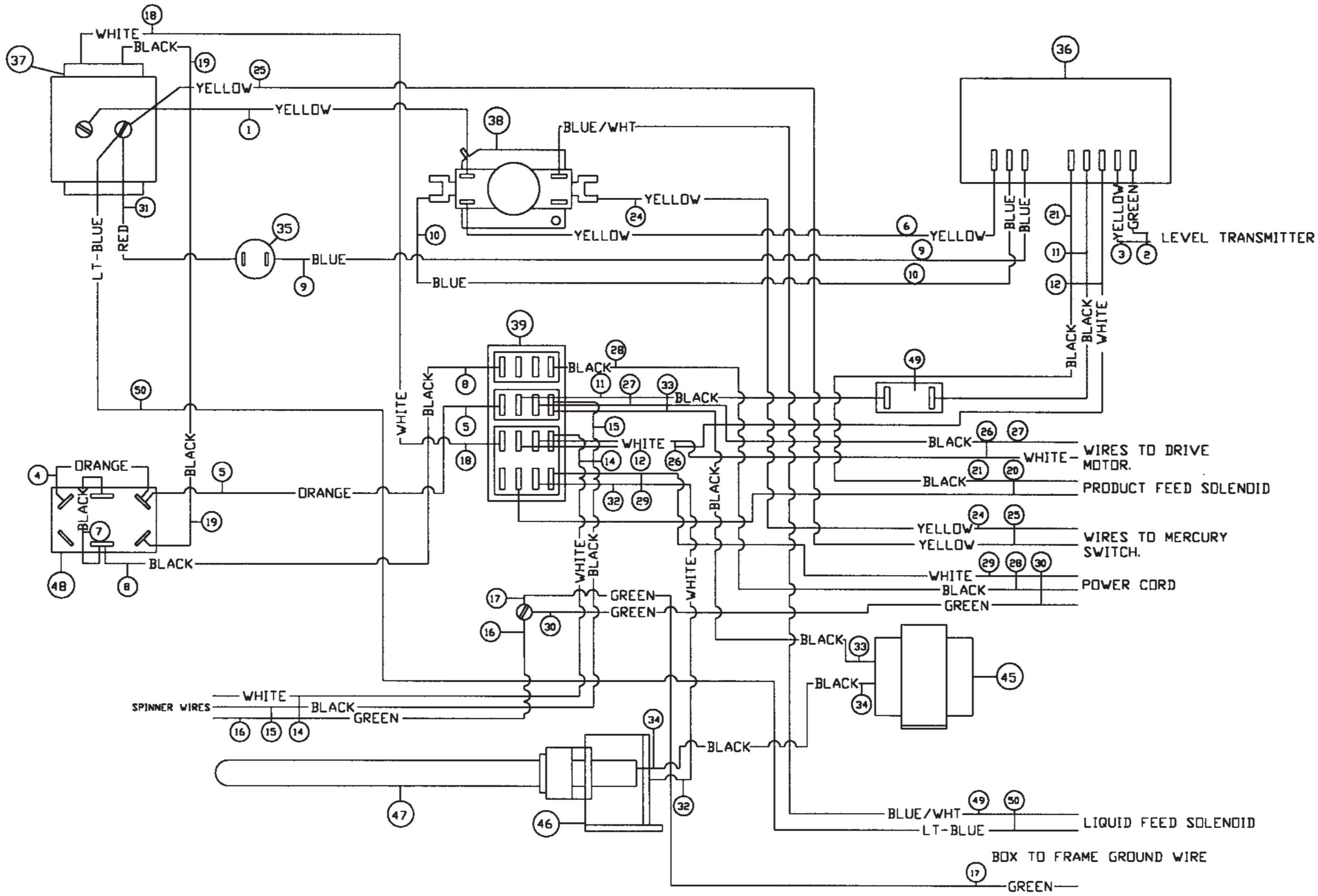


Item	Part Number	Description
35	W0570007	Indicator Light
37	W0572032	Transformer Sub-Assy
38	W0570660	Time Delay Relay
39	W0570235	Terminal Block
42	W0572192	Low Mix Sub-Assy.
43	W0572068	Power Cord
45	W0570045	Core & Coil Ballast
46	W0570044	Light Socket
47	W0570043	Florescent Light Bulb
48	W0570924	Switch

Model 3341 Ladder Diagram

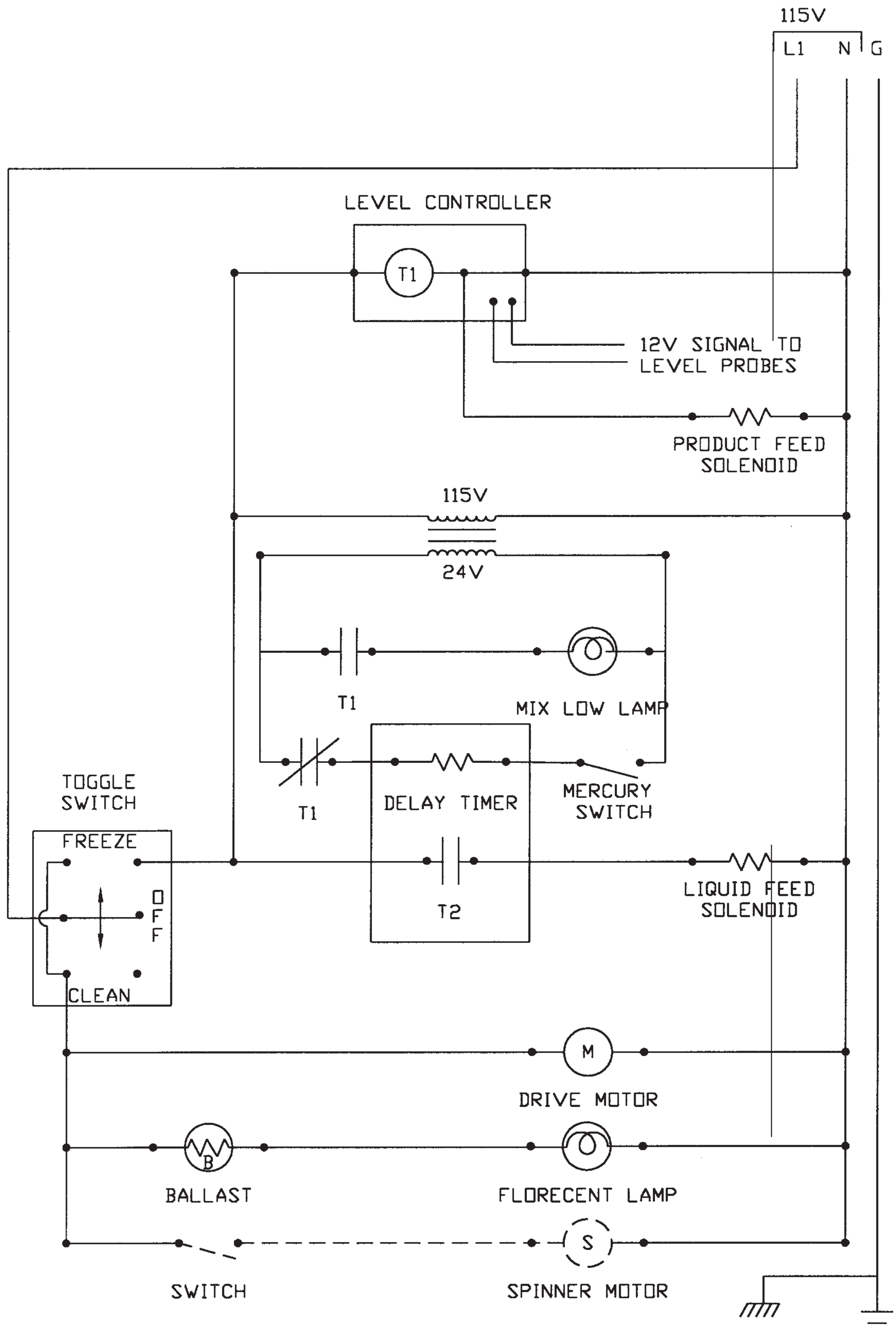


Model 3341A Wiring Diagram

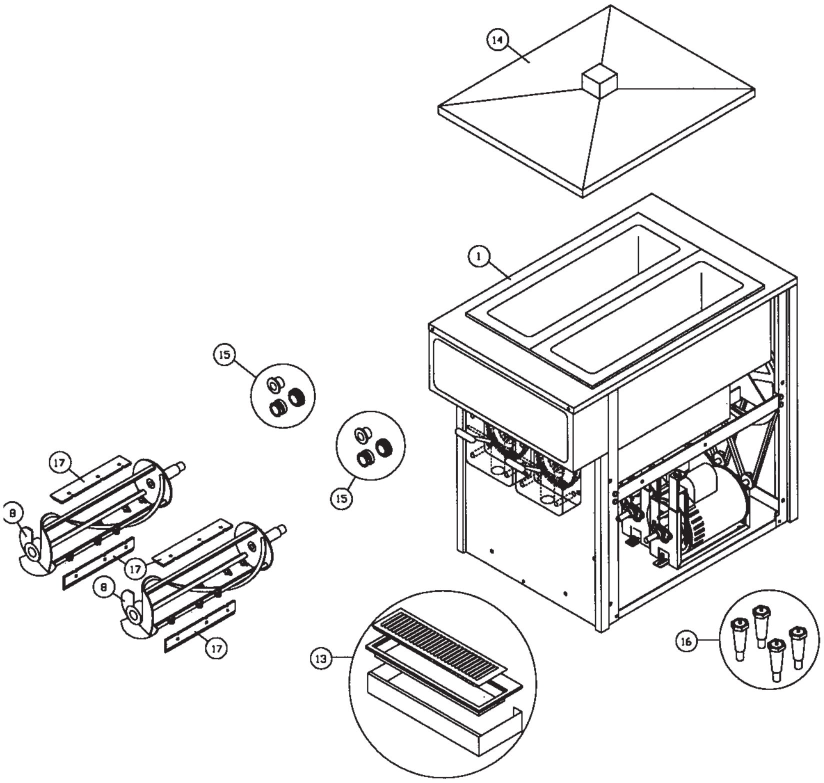


Item	Part Number	Description
35	W0570007	Indicator Light
36		Product Feed Solenoid
36	W0650050	Level Control
37	W0572032	Transformer Sub-Assy.
38	W0570651	Time Delay Relay
39	W0570235	Terminal Block
40		Liquid Feed Solenoid
41		Level Transmitter
42		Level Transmitter
43	W0572068	Power Cord
45	W0570045	Core & Coil Ballast
46	W0570044	Light Socket
47	W0570043	Florescent Light Bulb
48	W0570924	Switch

Model 3341A Ladder Diagram

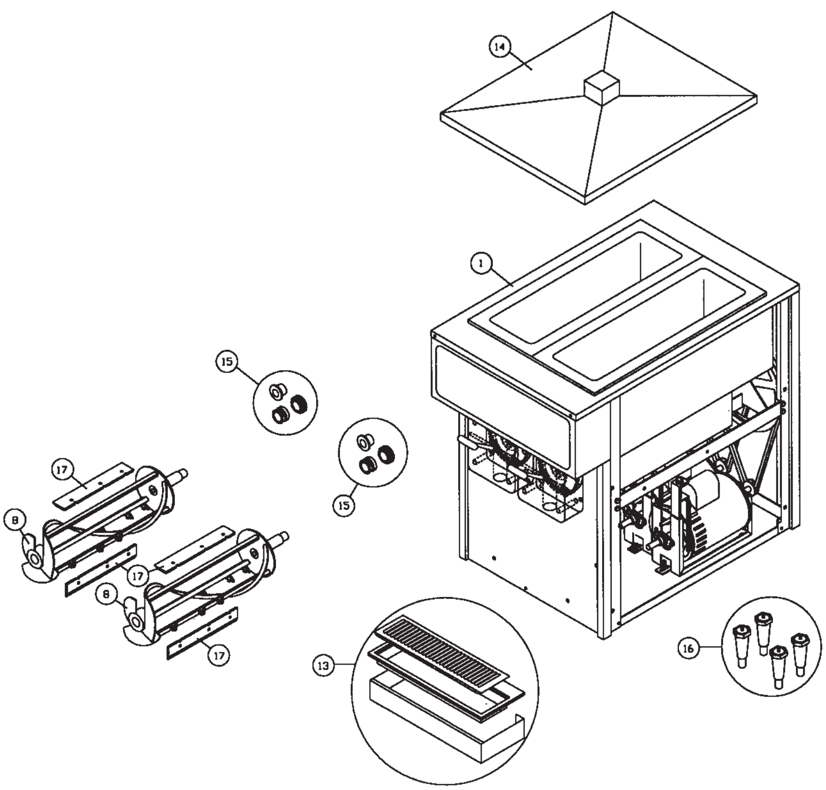


Exploded View Model 3342 Final Assembly



Item	Part Number	Description
1	W0151015	Stock Assy. 3342
2	W0600005	Serial Plate
3	W0600224	Owners Manual
4	W0660060	Plastic Bag
5	W0600121	Instr. Sheet, Install Header
6	W0600073	Caution Sheet
7	W0631903	Sanitizer Packets
8	W0430089	Standard Dasher
9	W0800126	L-Block 3312
10	W0800127	Box, 3312
11	W0800128	Top Pad
12	W0800123	Wooden Base Assy.
13	W0890182	Drip Pan Assy.
14	W0520093	Hopper Cover
15	W0890187	Standard Seal Kit
16	W0890220	Leg Kit
17	W1431084	Scraper Blade

Exploded View Model 3352 Final Assembly

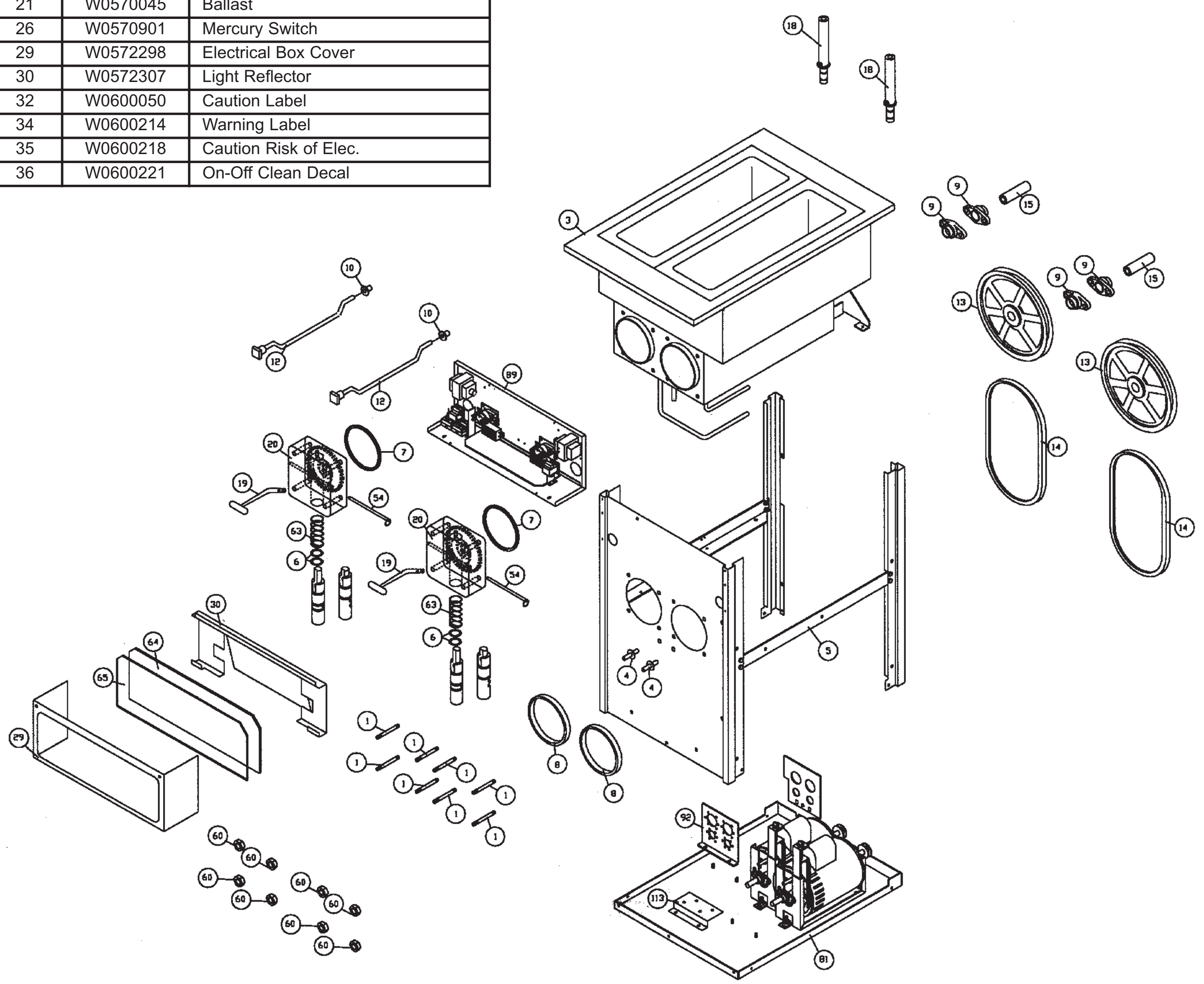


Item	Part Number	Description
1	W0151013	Stock Assy. 3352
2	W0600005	Serial Plate
3	W0600224	Owners Manual
4	W0660060	Plastic Bag
5	W0600121	Instr. Sheet, Install Header
6	W0600073	Caution Sheet
7	W0631903	Sanitizer Packets
8	W0430089	Standard Dasher
9	W0800126	L-Block 3312
10	W0800127	Box, 3312
11	W0800128	Top Pad
12	W0800123	Wooden Base Assy.
13	W0890182	Drip Pan Assy.
14	W0520093	Hopper Cover
15	W0890187	Standard Seal Kit
16	W0890220	Leg Kit
17	W1431084	Scraper Blade

Exploded View Model 3342 Stock Assembly

Item	Part Number	Description
1	W0110013	Valve Studs
3	W0201338	Evaporator Foam Assy.
4	W0211112	Drain Tube Fitting
5	W0211210	Frame Assembly
6	W0340022	213 O-Ring
7	W0340055	O-Ring for Valve Body
8	W0340058	Barrel Gasket
9	W0380025	Modified Flange Bearing
10	W0430024	Blind Flange Bearing
12	W0430028	Stator Weldment
13	W0450053	Sheave
14	W0450209	Belts
15	W0451067	Slush Drive Shaft
16	W0470013	Rubber Pad
17	W0470047	Lubrifilm
18	W0471076	Carburetor Assy.
19	W0480445	Valve Handle
20	W0480450	Valve Body
21	W0570045	Ballast
26	W0570901	Mercury Switch
29	W0572298	Electrical Box Cover
30	W0572307	Light Reflector
32	W0600050	Caution Label
34	W0600214	Warning Label
35	W0600218	Caution Risk of Elec.
36	W0600221	On-Off Clean Decal

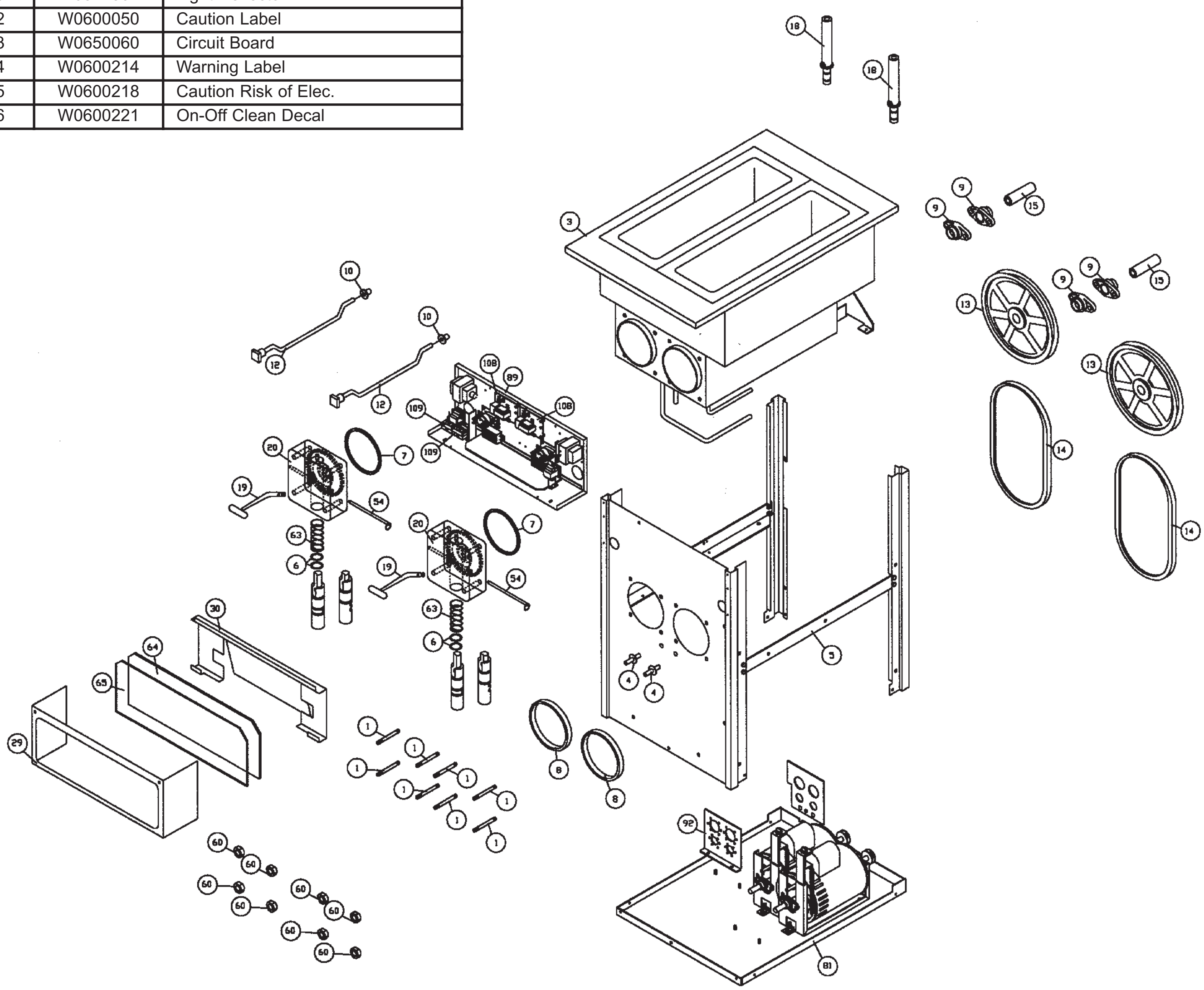
Item	Part Number	Description
59	W0630604	Heyco Strain Relief
60	W0630711	Valve Knobs
63	W0631230	Valve Springs
64	W0631620	Front Display Lens
65	W0631621	Front Display Lens Clear
66	W0641027	Drain Tube Hose
81	W0211222	Base Assembly
85	W0200312	Filter Drier
88	W0572068	Power Supply Cord
89	W0572382	Electrical Box Assembly
90	W0650032	Solenoid Valve
91	W0650116	Capillary Tube
121	W0520093	Hopper Cover
122	W0520102	Rear Panel S.S.
123	W0520081	L.H. Side Panel S.S.
124	W0520082	R.H. Side Panel S.S.



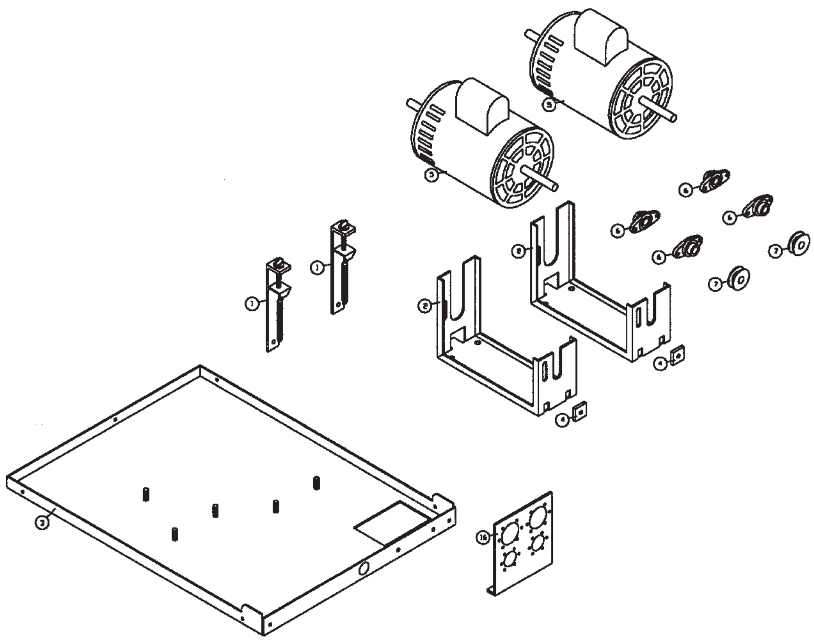
Exploded View Model 3352 Stock Assembly

Item	Part Number	Description
1	W0110013	Valve Studs
3	W0201348	Evaporator Foam Assy.
4	W0211112	Drain Tube Fitting
5	W0211210	Frame Assembly
6	W0340022	213 O-Ring
7	W0340055	O-Ring for Valve Body
8	W0340058	Barrel Gasket
9	W0380025	Modified Flange Bearing
10	W0430024	Blind Flange Bearing
12	W0430028	Stator Weldment
13	W0450053	Sheave
14	W0450209	Belts
15	W0451067	Slush Drive Shaft
16	W0470013	Rubber Pad
17	W0470076	Lubrifilm
18	W0471076	Carburetor Assy.
19	W0480445	Valve Handle
20	W0480450	Valve Body
21	W0570045	Ballast
26	W0570901	Mercury Switch
29	W0572298	Electrical Box Cover
30	W0572307	Light Reflector
32	W0600050	Caution Label
33	W0650060	Circuit Board
34	W0600214	Warning Label
35	W0600218	Caution Risk of Elec.
36	W0600221	On-Off Clean Decal

Item	Part Number	Description
54	W0611728	Fas Pin
59	W0630604	Heyco Strain Relief
60	W0630711	Valve Knobs
63	W0631230	Valve Springs
64	W0631620	Front Display Lens
65	W0631621	Front Display Lens Clear
66	W0641027	Drain Tube Hose
76	W0650033	Solenoid Valve
77	W0600180	Autofill Label
78	W0620350	Autofill Tube Connection
79	W0210003	Dual Autofill Sole. Brkt.
80	W0952006	Autofill Tube Assy.
81	W0212222	Base Assembly
85	W0200312	Filter Drier
88	W0572068	Power Supply Cord
89	W0572380	Electrical Box Assembly
90	W1650005	Solenoid Valve
91	W0650116	Capillary Tube
108	W0572365	Mix Low Probe
109	W0630426	Detiker Clamps

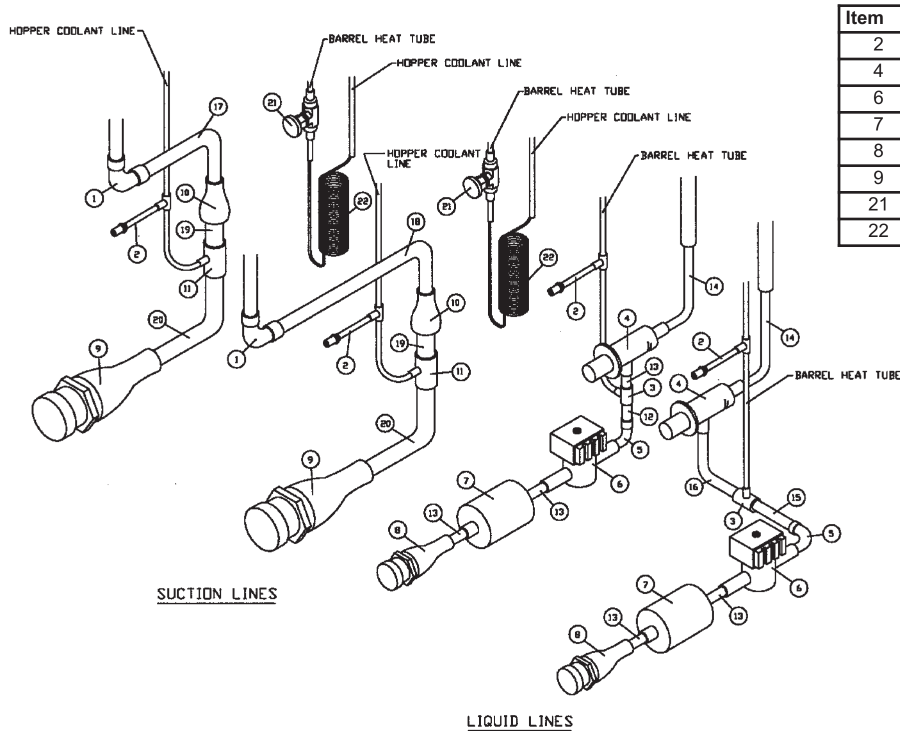


Exploded View Models 3342/3352 Motor Assembly



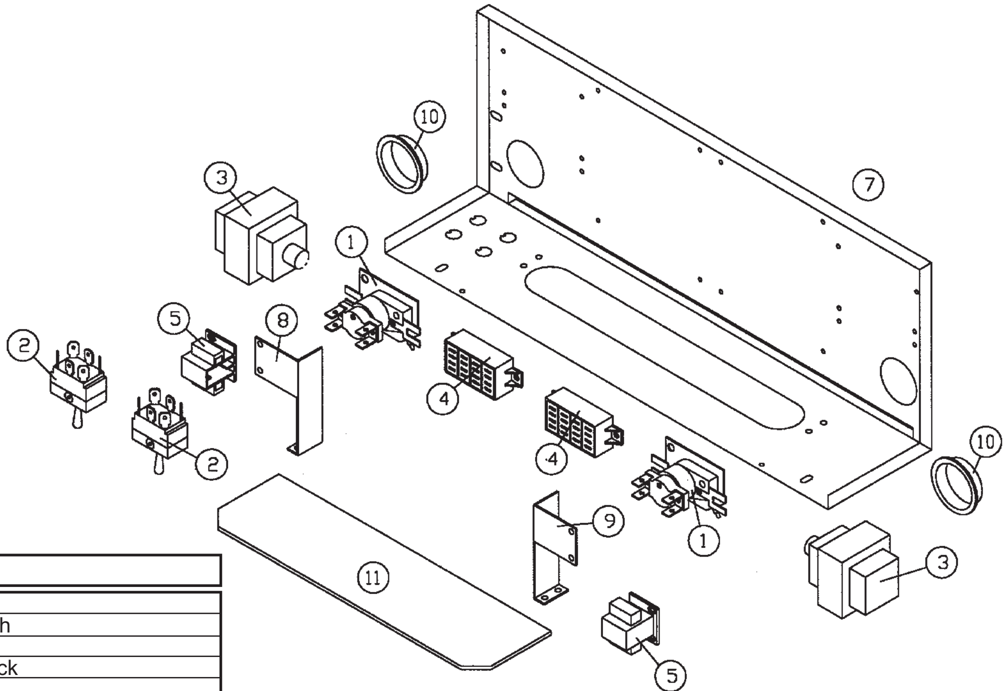
Item	Part Number	Description
1	W0170014	Consistency Cntrl.
2	W0210169	Motor Cradle
3	W0210200	Frame Bottom Plate
4	W0321013	Motor Adj. Nut
5	W0321020	Motor Assembly
6	W0380009	Flange Bearing
7	W0451000	Pulley

Base Assembly Refrigeration Models 3342/3352



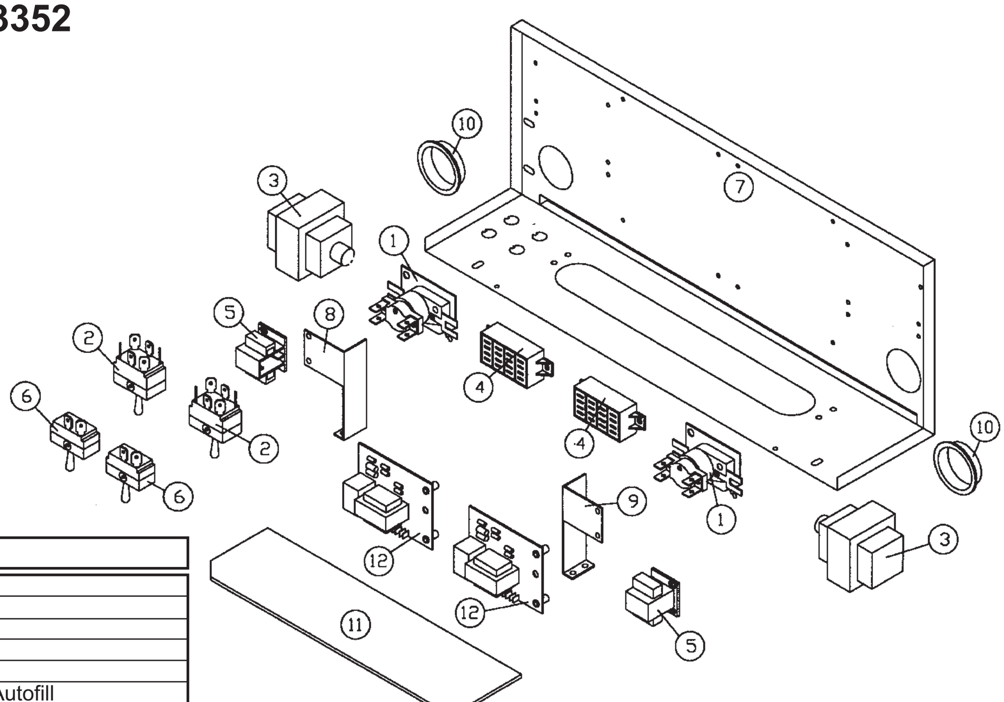
Item	Part Number	Description
2	W0650501	Access Valve
4	W0650104	Automatic Exp. Valve
6	W1650005	Solenoid Valve
7	W0200312	Filter Drier
8	W0620117	3/8" Quick Disconnect
9	W0620118	5/8" Quick Disconnect
21	W0650416	Needle Valve
22	W0650116	Capillary Tube

Electrical Box Model 3342



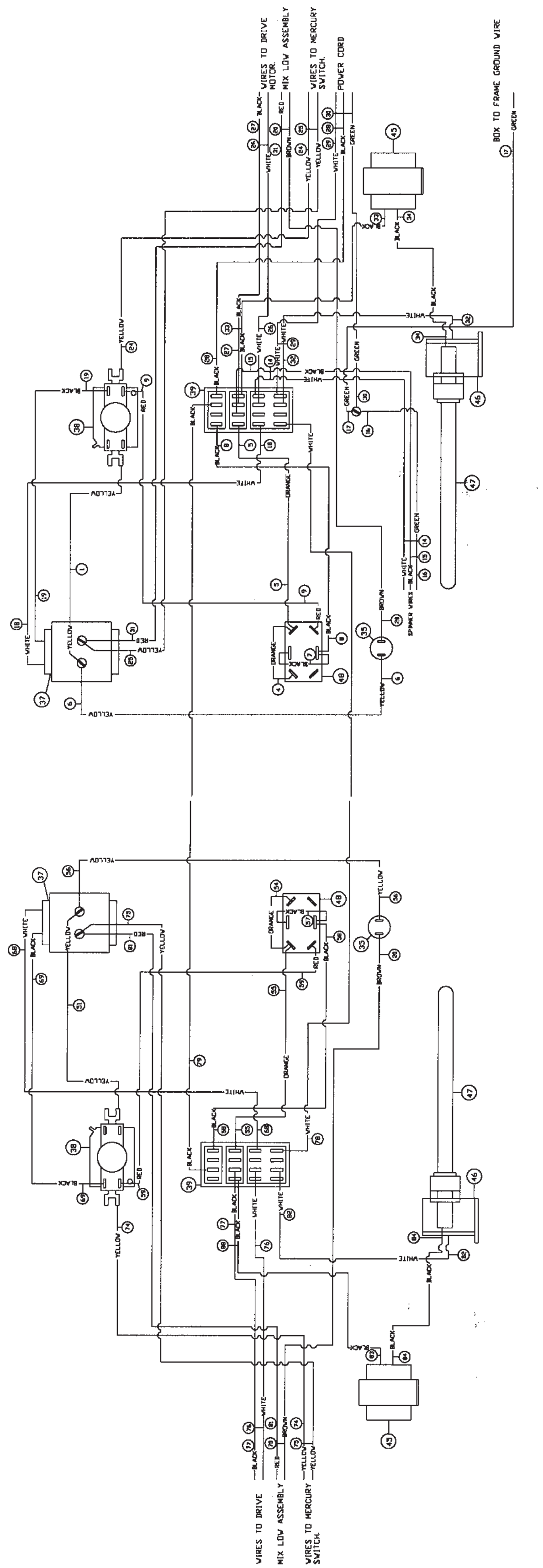
Item	Part Number	Description
1	W0570660	Sequencer
2	W0570924	Toggle Switch
3	W0572032	Transformer
4	W0570235	Terminal Block
5	W0570044	Light Socket
7	W0572297	Elec. Box
8	W0572305	Light Bracket L.H.
9	W0572306	Light Bracket R.H.
10	W0630008	Heyco Bushing
11	W0631619	Elec. Box Lens

Electrical Box Model 3352



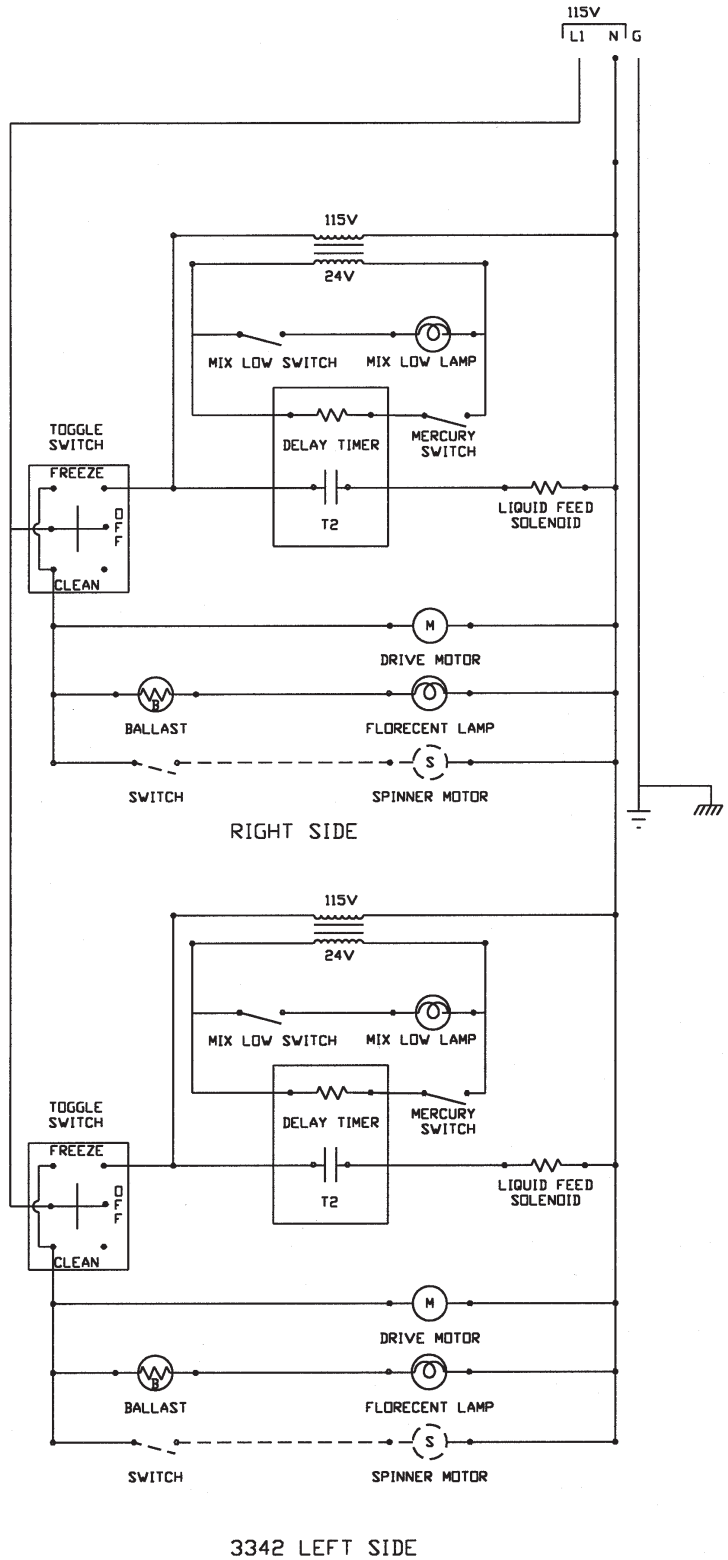
Item	Part Number	Description
1	W0570660	Sequencer
2	W0570924	Toggle Switch
3	W0572032	Transformer
4	W0570235	Terminal Block
5	W0570044	Light Socket
6	W0570910	Toggle Switch, Autofill
7	W0572450	3312 Elec. Box
8	W0572305	Light Bracket L.H.
9	W0572306	Light Bracket R.H.
10	W0630008	Heyco Bushing
11	W0631619	Elec. Box Lens
12	W0650050	Liquid Level Control

Model 3342 Wiring Diagram

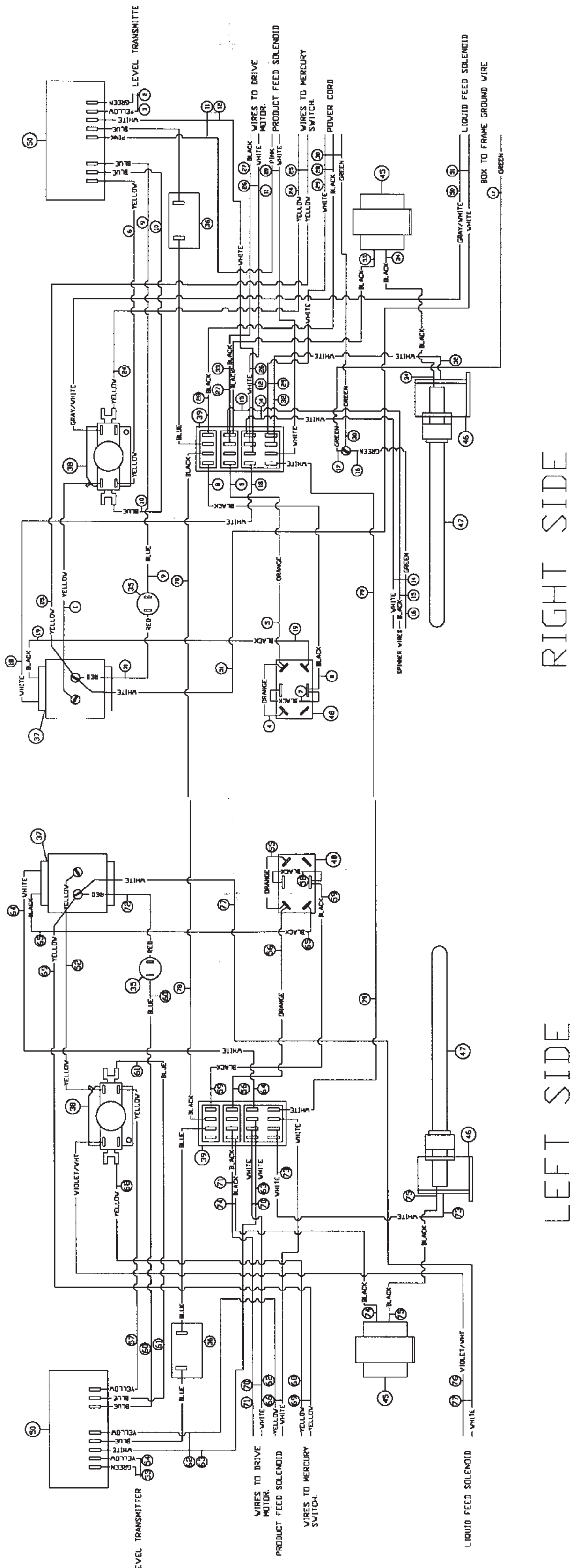


Item	Part Number	Description
35	W0570007	Indicator Light
36	W0650050	Level Control
37	W0572032	Transformer Sub-Assy.
38	W0570660	Time Delay Relay
39	W0570235	Terminal Block
40	W0650005	Liquid Feed Solenoid
43	W0572068	Power Cord
45	W0570045	Core & Coil Ballast
46	W0570044	Light Socket
47	W0570043	Florescent Light Bulb
48	W0570924	Switch

Model 3342 Wiring Ladder Diagram

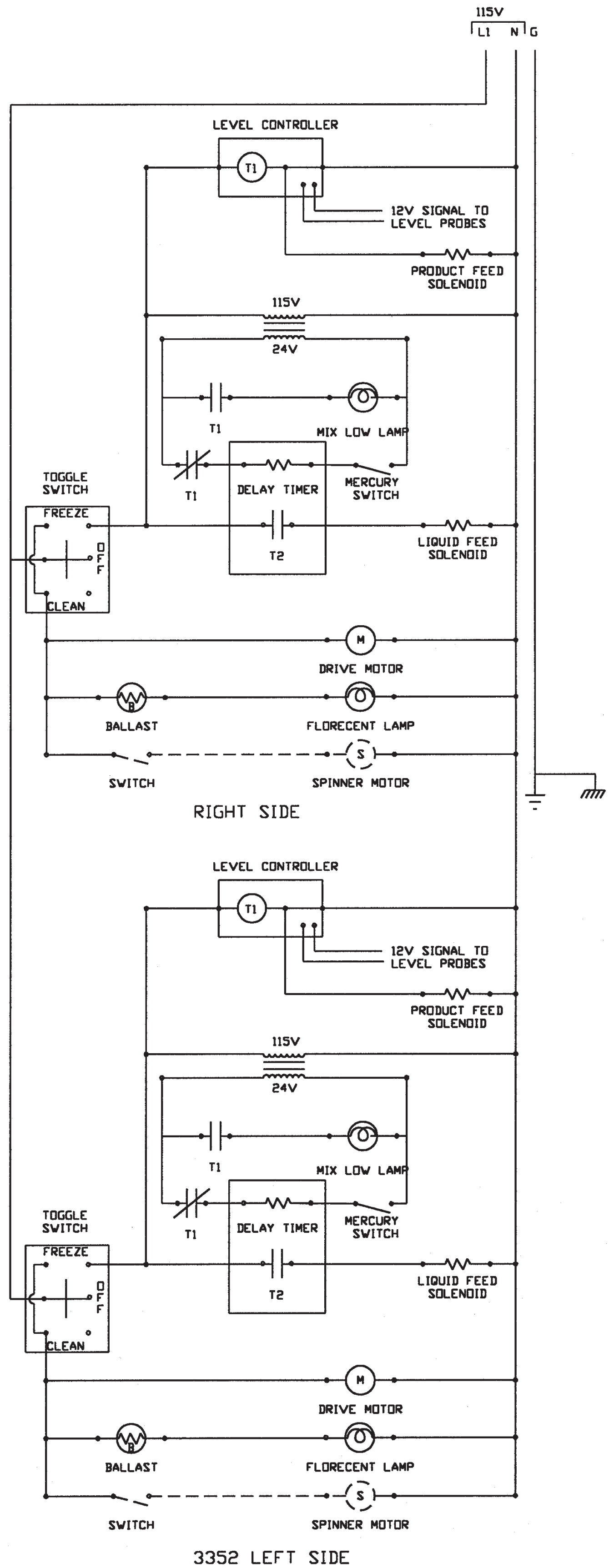


Model 3352 Wiring Diagram

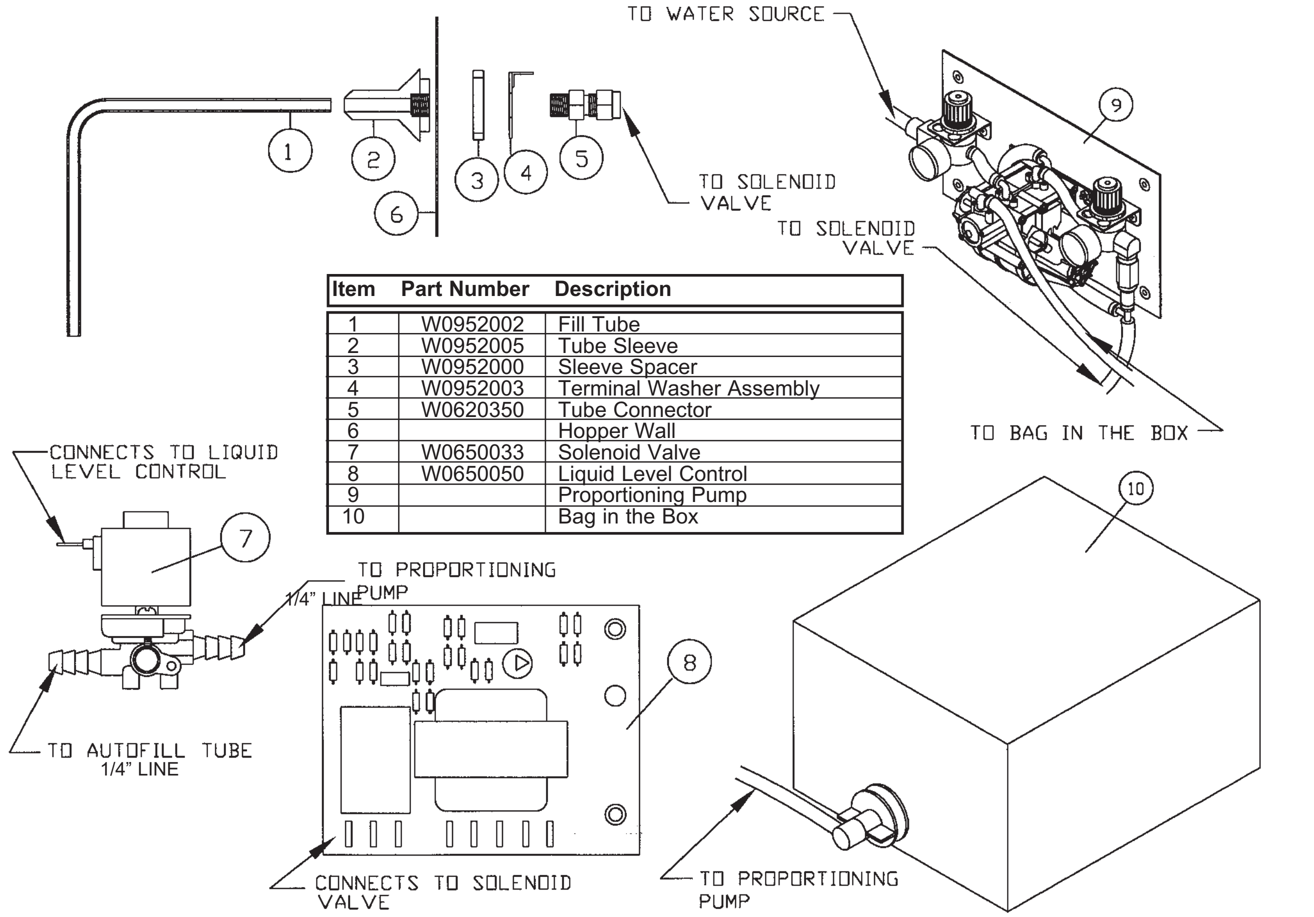


Item	Part Number	Description
35	W0570007	Indicator Light
36	W0570910	Switch
37	W0572032	Transformer Sub-Assy.
39	W0570235	Terminal Block
40	W1650005	Liquid Feed Solenoid
41	W0650050	Level Transmitter
42	W0560050	Level Transmitter
43	W0572068	Power Cord
45	W0570045	Core & Coil Ballast
46	W0570044	Light Socket
47	W0570043	Florescent Light Bulb
48	W0570924	Switch
49	W0650033	Product Feed Solenoid

Model 3352 Ladder Diagram

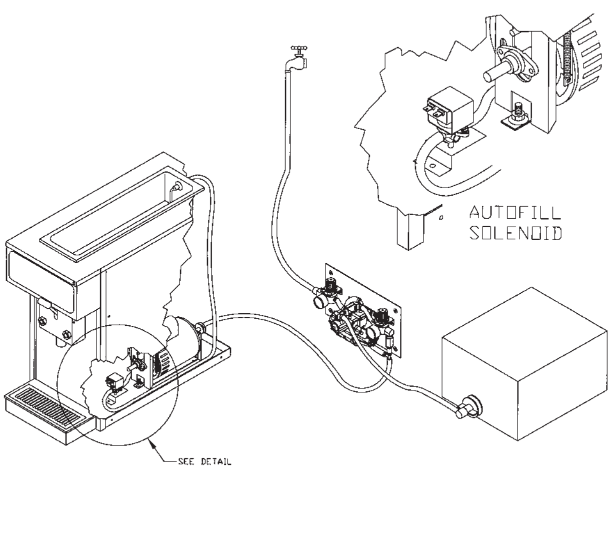


Autofill Connections for Models 3341A & 3352

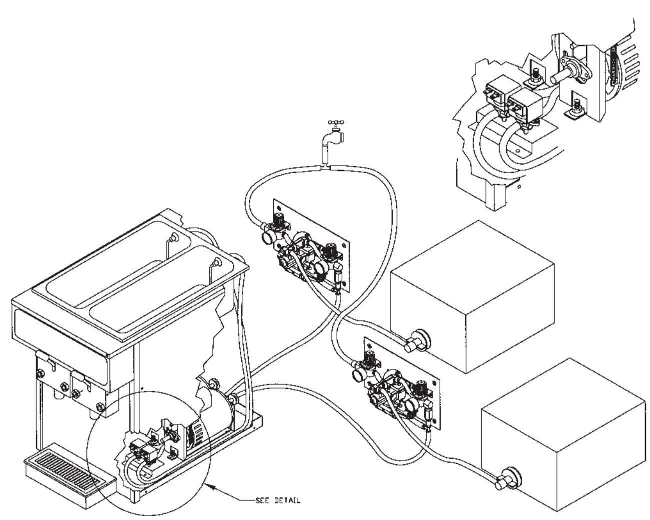


Item	Part Number	Description
1	W0952002	Fill Tube
2	W0952005	Tube Sleeve
3	W0952000	Sleeve Spacer
4	W0952003	Terminal Washer Assembly
5	W0620350	Tube Connector
6		Hopper Wall
7	W0650033	Solenoid Valve
8	W0650050	Liquid Level Control
9		Proportioning Pump
10		Bag in the Box

Model 3341



Model 3352



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